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CANNON, LONDON" (2 Words)

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Vol. XCVIII.

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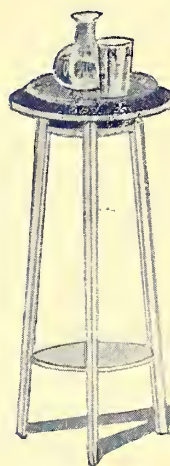
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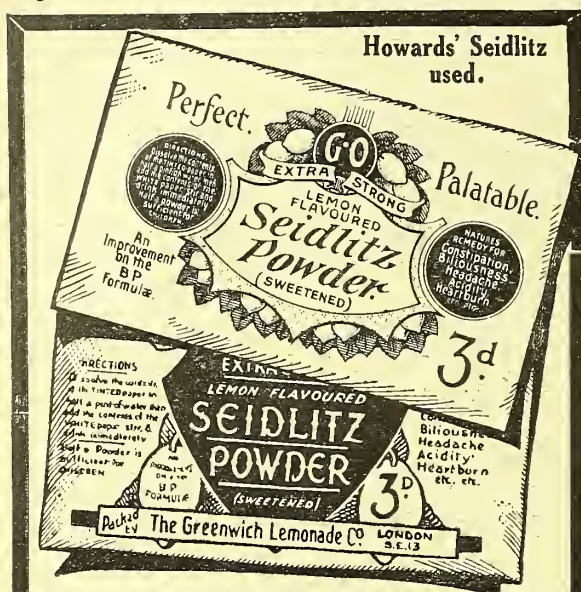
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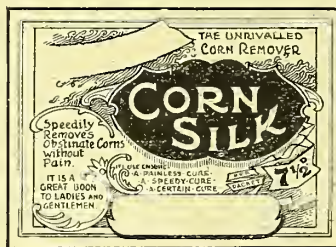
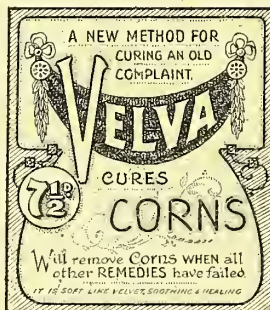
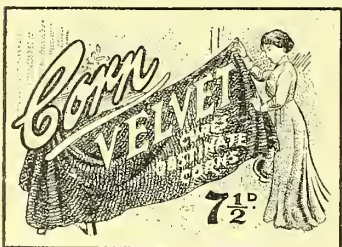
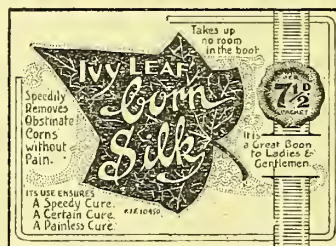
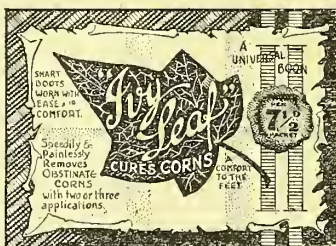
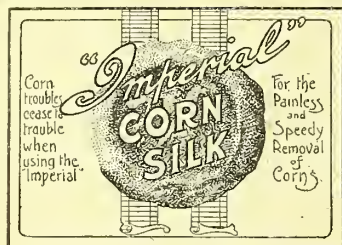
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78, FRONT STREET,





# Envelopes FOR CORN SILK & CORN VELVET



THESE ENVELOPES ARE ALL LITHOGRAPHED IN THREE OR FOUR COLOURS, WITH THE CUSTOMER'S OWN NAME AND ADDRESS.

SEND FOR SAMPLES OF THE ACTUAL ENVELOPE

EACH DESIGN IS COPYRIGHT REGD. WELL KNOWN BY THE PUBLIC. WILL COMMAND GOOD SALES.

Full Set of Samples to Colonies charged 10/6, which amount we credit on Order of £10 and upwards.

# THOMAS WAIDE & SONS LTD.

## Chemists' Printers, LEEDS.



Maw's



Page

## **"Meritor" Advertising Is sending Customers to Your Counter.**

The splendid advertisements for "Meritor" Toilet Brushware which are appearing almost daily in the leading newspapers of the country are not only making customers for toilet brushware, but they are actually sending these customers to the chemists' counter.

Every "Meritor" advertisement states clearly that "Meritor" brushware is only supplied by chemists. The whole "Meritor" advertising scheme is directed at increasing the chemists' business in toilet brushware, and at the same time adequately protecting this branch of his business from future attacks from outside competitors. You plant the seed of future prosperity when you put your power behind the "Meritor" idea.

Have you made your preparations for assisting the "Meritor" scheme, and reaping your share of the harvest which "Meritor" advertising will certainly bring? Have you adequate stocks of "Meritor" brushware and display material? Is there a full display of "Meritor" brushware in your window or your pharmacy?

*Watch "Meritor" advertising appearing in the "Daily Mail," "Daily Mirror," "Daily Sketch," "Daily Express," "Daily Telegraph," "Scotsman," "Glasgow Evening Times," "Yorkshire Evening Post," "Manchester Guardian," "Birmingham Daily Post," "Irish Times," "Sunday Times" and "Punch." "Liverpool Post," "Belfast News Letter."*

**S. Maw, Son & Sons, Ltd.**

Aldersgate St., London,  
and Barnet.

Telephone:  
**City. 7**  
Private  
Branch  
Exchange

Telegrams:  
**Eleven  
Cent  
London**

TRADE



MARK

Cables:  
**Eleven  
London**

Code:  
**A.B.C.  
4th & 5th  
Edition**



# Death Sentence

*has been issued to  
all insect pests.*



## "EXTERPEST"

**NON-POISONOUS**

**Guaranteed to Exterminate  
not Stupefy**

**BETTER, COCKROACHES, CRICKETS,  
STEAM FLIES, ANTS, MOTHS,  
POULTRY INSECTS, WOOD LICE, and  
all similar Insect pests.**

*It is recommended by municipalities,  
etc. Testimonials innumerable.*

The Insects on contact with "Exterpest" carry same to the eggs and fellow insects, thus destroying the whole family group and getting at the root of the evil.

"Exterpest" is manufactured by scientists and entomologists—not quacks.

**OBTAINABLE FROM YOUR  
USUAL WHOLESALER.**

You can recommend it as thoroughly efficient and your profit is good.

*Enquiries Invited.*

*Retails in Tins at 6d., 1/3, 2/6, 5/-*

**Smethurst & Meade, Ltd.**

**16 John Dalton St.,  
MANCHESTER.**

Telephone - - 5018 City.

**Continuous and Steadily Advertised Goods  
FOR DESTROYING RATS AND MICE**

## DANYSZ VIRUS

Retail Price (protected).	Net Wholesale Prices.
Virus for Rats and Mice, single tube, 2/-	15/- per doz.
3 tubes, 5/-	
Virus for Mice only - single tube, 1/6	9/- " "
3 tubes, 3/-	
Date-expired tubes returned to us postage paid will be exchanged free of charge.	

## Danysz Virus in Liquid Form

Retail Price.	Wholesale Price.
Quart Bottles 6/- each	4/6 each
Pint " 4/6 "	3/9 "

## HALLER'S EXTRACT OF SQUILL and DANZO RAT KILLER

Discount off Retail Prices 25% Monthly Account, or 33 1/3% cash with order.

	Retail	Monthly a/c	Cash with order.
1/2 gall. tins	10/-	7/6	6/8
1 " "	18/-	13/6	12/-
5 " "	80/-	60/-	53/4

## DANZO BEETLE POWDER

For destroying Blackbeetles, Cockroaches, Crickets, &c.	
Retail Prices (protected).	Wholesale Prices per doz.
In tins 3d.	In boxes of 2 doz. 2/1
" 6d.	" " 1 " 3/8
" 1/-	" " 1 " 7/5
" 2/6	" " 1 " 18/-

Danzo Beetle Powder will not deteriorate by keeping.

**CARRIAGE PAID ON ALL ORDERS.**

*To be obtained from*

**HALLER LABORATORIES, LTD.,  
325 Borough High Street, LONDON, S.E.1**

Telegrams: "Virudana, Sedist, London."

Telephone: Hop 2717

**NON-CURLING  
GUMMED  
PAPERS  
For LABELS**

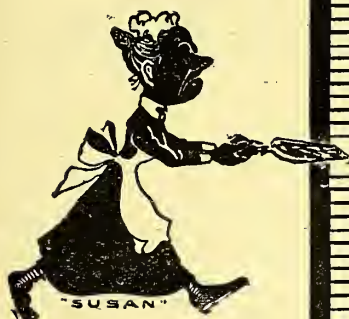
BY

**SAMUEL JONES  
& CO., LTD.**

**BRIDEWELL PLACE  
LONDON**

Established Anno Domini 1810





# I.K.



There are more ways than one of killing a cat—but *there is only one way to kill a cockroach.*

The only way.

Specimen Order with Bonus for Window Display					
				Cost	Selling Price
6	doz.	4d. at 2/8	...	16 0	1 4 0
1 1/2	"	Free	...	-	2 0
5	"	8d. at 5/4	...	1 6 8	2 0 0
5/12	"	Free	...	-	3 4
1	"	1/3 at 10/-	...	10 0	15 0
1/12	"	Free	...	-	1 3
				£2 12 8	£4 5 7
PROFIT				62.2% on cost.	

Double this order to obtain 5 per cent. discount and a profit of **£3.11.1** on an outlay of **£5.**

Everybody asks for it—  
but only chemists stock it.

# EVANS

**EVANS SONS LESCHER & WEBB, LTD.**  
LIVERPOOL      New York      LONDON



# Companion Lines



WELL PACKED IN  
BOXES OF 2 DOZEN.

WELL PACKED IN  
BOXES OF 3 DOZEN.



## 'SIMPLIC' REGD. SOOTHERS

Made of purest  
India Rubber.

No taste or smell.

Practically indestructible.  
The most perfectly made  
all-rubber soother ever  
offered for sale.

## 'SIMPLIC' TEATS

REGD.

Made of purest India Rubber.

In 8 different patterns.

Each in separate carton.

IN BOXES OF 3 DOZEN.

Ask your Wholesaler for "Simplic" REGD.



# A holiday for the Chemist —No

such luck—the hardest worked Profession carries on, Easter or any other time.

We sweeten the “bitter pill” by offering a few lines which, by consolidating sales, may make it possible to have “a holiday later on.”



“Eradico” Corn Velvet  
in distinctive counter display boxes  $8\frac{1}{2} \times 4$

per doz. envelopes - 3/9  
„ gross - - - 42/-



“Eradico” Corn Discs

12 discs with fixers in envelopes and display box

per doz. envelopes - 3/9  
„ gross - - - 42/-



“American” Corn Silk  
in distinctive counter display boxes  $8\frac{1}{2} \times 4$

per doz. envelopes - 3/9  
„ gross - - - 42/-

Corn Strap Rings

attractively packed in slide boxes of 6 rings, pads and straps

doz. 6/6 gross 75/-

Name on gross lots

**AYRTON  
SAUNDERS & CO.  
Ltd. - - LIVERPOOL.**



# HAY'S ESSENCES



## — FOR — AERATED WATERS

MESSINA LEMON  
LIME JUICE & SODA  
PALE DRY GINGER ALE  
**STONE GINGER BEER**  
**QUALITY—FINEST OBTAINABLE**

*SAMPLES AND QUOTATIONS ON APPLICATION*

HEAD OFFICE  
&  
LABORATORIES  
HULL

**WM. HAY, LTD.**  
Essence Distillers,  
**HULL & LONDON**

LONDON DEPOT,  
3 BROWNING ST.,  
WALWORTH RD.,  
S.E. 17.

Telegrams "Ginger Hull"; "Bushworth London."

Codes: A B C, 5th Edition; Bentley's.



You will never find  
"Mineral Spring" here



#### PRICES

##### RETAIL

1/- & 2/-  
(P.A.T.A.)

##### TRADE

8/- & 16/-  
per dozen.

For orders  
of 5 gross  
7/6 & 15/-  
per dozen.

5% Dis-  
count for  
prompt  
cash.

Carriage  
paid on  
orders for  
£1 and up.

"MINERAL SPRING" is not, and never has been a grocery line scheming to get the *entree* to pharmaceutical society. "Mineral Spring" is the Chemist's Own Effervescent and cannot be ordered from the grocer along with the soap and tinned meats.

Repeat orders for "Mineral Spring" come to the pharmacy and yield a profit of over 40% for an order of only 5 gross.

THOMAS KERFOOT & CO LTD  
BARDSLEY VALE, LANCASHIRE,  
& Bardsley House, London, N.1  
ESTABLISHED 1797.

COPYRIGHT



# Ma Chérie

(REGD.)

## Toilet Preparations and Perfumery.

**FACE POWDERS** 4 shades—White, Rachel, Chair (Natural) and Rose. Three sizes  
4/=-, 6/6, 10/=- doz.

**SOLID POWDERS** In 10 shades—White, Rachel, Naturelle, Rose, Rouge, Incarnat, Rouge Foncé, Rouge Brunette I, Rouge Brunette II, and Egyptienne.  
In card boxes, with puff ... 4/=- doz.  
In gilt metal boxes, with puff 8/=- „

**VANISHING CREAM** Specially prepared that it may be used a Day or Night Cream—a real Skin Food in All China Pot, each pot in carton. 10/=- doz.

**SOAP LEAVES** 40 leaves in a book. Sell at sight to all golfers, motorists, doctors, etc. Invaluable for washing in emergency as these can be carried in pocket book. Antiseptic and delightfully perfumed. 30/=- gross.

**SHAMPOO POWDERS** Each shampoo contains sufficient for 3 wet shampoos. Unbeatable for quality and price. 12/=- gross.

**TOOTH PASTE** Specially prepared and sweetened with Saccharin to ensure that no anti-dental constituent is contained in its manufacture. 8/=- doz.

**DIPLOMAT** Regd.  
**SHAVING STICK** in nickel case, 8/=- doz. **RELOADS** for above in cardboard outer, 4/3 doz. (reduced wholesale price).

**MA CHÉRIE BATH SOAP** 6 in box, assorted perfumes and each tablet packed separately. 5/6 doz. (reduced wholesale price)

**MA CHÉRIE BATH SOAP (New Shape)**  
Made absolutely flat. Will not slide about, each tablet cellophane wrapped. 4 in box assorted perfumes. 6/6 doz. (reduced wholesale price).

**NOTE.**—In cases where we have reduced wholesale prices P.A.T.A. prices remain as heretofore. Cash discounts and "all goods carriage paid" is not affected by reductions.

**MA CHÉRIE BATH SALTS**  
40 oz. in glass stoppered jar. We beg to advise our numerous clients that the above well-known line has been advanced from 40/- dozen to 60/- dozen and the retail price to 7/6, owing to the advanced cost of production. In 14 different perfumes.

Chemists wishing to make a good investment for the Spring are recommended to lay in a stock at present price.

**Johann Maria Farina** Eau de Cologne  
(Professor Dr. Pilgram)  
We have still a small quantity of this line remaining, in 3 sizes as advertised.

## MA CHÉRIE, Ltd.

London House : 35 Crutched Friars, E.C.3

*“Specialty”*

## Brilliantines and Toilet Paraffins

### BEST QUALITY BIGGER PROFITS

Selling “Specialty” Brilliantines and Toilet Paraffins not only means liberal profits for you, but assures a continuous demand by your customers who appreciate high-quality products that are always reliable.

As one of the largest importers of White Oils, we are in the favourable position of being able to quote you exceptionally keen prices. Guaranteed superior quality goods. You can prove this for yourself by sending for samples and our latest attractive quotations.

“Specialty” Brilliantines and Toilet Paraffins are supplied in a wide variety of high-quality Perfumes to the Retailer's own choice.

### PACKED GOODS

All classes of Medicinal and Toilet Lines, including Liquid Paraffins and Emulsions, Ointments, Cold Creams, Petroleum Jellies, etc., in most attractive packings at extremely fine prices.

Send for latest Price List.

## Specialty Dept.

### Anglo-American Oil Co. Ltd.

Albert Street,  
Camden Town, London, N.W. 1.





# Link up with an Expanding Market!

FOR every woman who is now using West Electric Hair Curlers there are ten others ready to buy on sight—and a hundred more already interested and in a receptive attitude. It is an expanding market.

The West Electric Hair Curler is a practical, simple, but ingenious appliance for waving hair quickly at home. It is small in price. It is popular. It is a success. It is the *premier* invention of its kind. The demand grows. It is the purpose of the West Electric Hair Curler Co.'s advertising in the Press, in the magazines, at exhibitions, to increase the demand as rapidly as is conservatively desirable.

This is your opportunity. Every sale you make is a sale for *us*, but it is also a customer and advertisement for *you*. We undertake the publicity *ourselves*, because we can buy advertising space and printed matter economically on a national scale at wholesale prices. Our publicity efforts attract and interest the public.

It is for *you* to make or complete the sale. And every card of West Electric Hair Curlers you stock, display and sell, is an advertisement for your shop and a link with your present and prospective clientele. One woman buys a set. Her friends see it. She naturally directs them to your shop. In reality, every user of West Electric Hair Curlers is inevitably the purchaser of more, and the nucleus which influences a dozen sales additional.

Link up with an expanding market. Put West Electric Hair Curlers on your counter and in your



Standard  
Card of 4  
Retails at  
**1/-**

windows. You will attract customers who have never been in your shop before. And your old customers will take a new interest in the variety and scope of your service.

The time to use an opportunity is *now*. West Electric Hair Curlers can be obtained from an increasing number of good wholesalers who carry them in stock for the accommodation and convenience of the trade.

The name "West Electric" on each card is a protection against imitations that have not been scientifically evolved, tempered, and electrified, and have not the patented double-lock disc clasp. If not easily obtainable, write us for terms and trade brochure, mentioning, if you wish, the name of the wholesaler by whom you wish to be supplied—Do it now.

A reasonable supply of display material always at your service gratis on request.

WEST ELECTRIC HAIR CURLER CO. (Dept. 64), 22 & 23 Charles St., Hatton Gdn., London, E.C.1



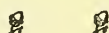
# WEST ELECTRIC

## Hair Curlers



# A Good Resolution

*During 1923 only to  
serve the best procurable*



The Best Bath Tablets are

**EUCRYL BATH TABLETS**

7½d. per box of 4.

The only Tablets for  
the Handbasin are

**EUCRYL AQUALETTES**

9d. per box of 48.

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*No Free Caustics. Immediately Soluble.*

---

Delicately Perfumed Tablets of

**FROZEN FRAGRANCE**

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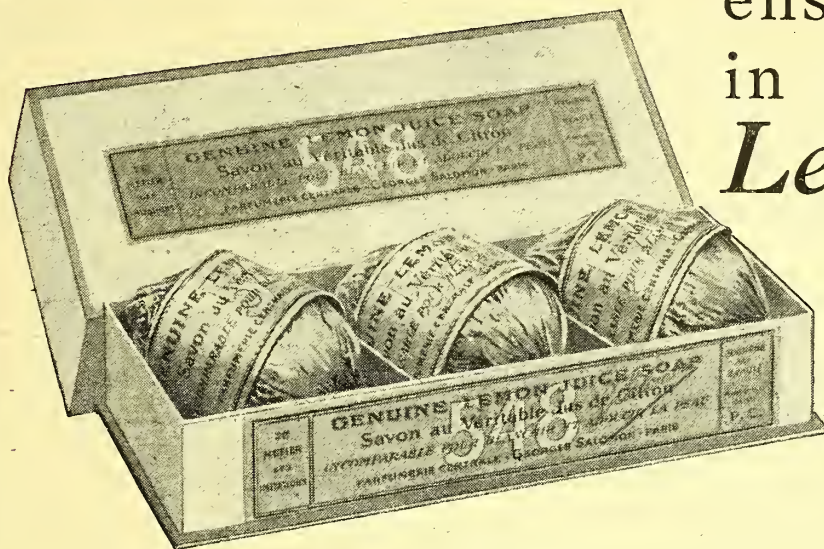
*Write for Generous Introductory Terms to*

**EUCRYL, LTD.**

**Shirley      =      =      =      Southampton**



# There's *Sunshine* enshrined in the *Lemon*



## 548

THE lemon being a fruit of the sun-belt—no wonder its vitalizing juices also have the health-giving qualities of sunshine.

Salomon's Lemon Juice Soap really does contain pure lemon juice with all its fine tonic properties pleasantly and conveniently available to the skin.

Led by the Beauty Salons, fashionable Paris has made Lemon Juice the vogue, for the toilet—and the ladies of Britain also have now discovered what a perfect luxury is Salomon's Lemon Juice Soap.

If you have (or desire) customers who place quality before price, introduce Salomon's Lemon Juice Soap and so convey that sense of discrimination which is the highest compliment you can pay them.

Boxed in 3's.

Retails  $1\frac{1}{3}$  Tab.

Trade  $9\frac{1}{6}$  doz. tabs.

*Manufactured  
Exclusively by*

**GEORGES SALOMON**  
PARIS

*Sole concessionnaires for Great Britain & Ireland :*

**ROBERT FERBER, LTD.**

Carlton Works, Asylum Road, Peckham, S.E.15

Sample Tablet, 9d. Box of three,  $2\frac{1}{3}$ , post free.

**WINDOW  
DISPLAY**

Write for special  
terms for window  
display lots. Show-  
cards and display  
material free.





# EVAN WILLIAMS' ORIGINAL Henna Shampoo

One of our Customers says:

"We are always pleased to handle Evan Williams' Specialities for, amongst other reasons—

"We never get any complaints.

"They are quick sellers.

"You leave the retailer a good margin of profit."

The EVAN WILLIAMS CO., LTD.,  
18 & 18a, Ogle St., Foley St., LONDON, W.1.

## DEARBORN (1923) LTD.

37 Gray's Inn Road,  
LONDON, W.C.1.

### Toilet Specialties.

	Price per doz.	Selling Price to Retailer P.A.T.A
PILENTA SOAP ..	10/-	1/-
A complexion soap.		
PROLACTUM ...	10/-	1/-
For the lips.		
PARSIDUM JELLY ...	10/-	1/-
For wrinkles.		
ALLACITE OF ORANGE		
BLOSSOM ...	22/6	2/6
A dressing cream.		
BORANIUM ...	22/6	2/6
A hair tonic.		
CLEMINITE ...	22/6	2/6
For a face lotion.		
COLLIANDUM ...	22/6	2/6
For a face tint.		
PERGOL ...	22/6	2/6
A deodorant.		
TEKKO PASTE ...	22/6	2/6
Camphor cream.		
STALLAX ...	22/6	2/6
For a shampoo.		
JETTALINE ...	31/6	3/6
For clearing the skin.		
PHEMINOL ...	36/-	4/-
A depilatory.		
MENNALINE ...	36/-	4/-
For the eyelashes.		
MERCOLIZED WAX ...	31/6	3/6
A face cream.		
STYMOL ...	36/-	4/-
For oily complexions and blackheads.		
SILMERINE ...	22/6	2/6
Hair-curling fluid.		
BARSYDE ...	22/6	2/6
Dandruff eradicator.		
TAMMALITE ...	22/6	2/6
For grey and faded hair.		
LIQUID PERGOL ...	31/6	3/6
To check excessive perspiration locally.		
BICROLIUM ...	22/6	2/6
For whitening the hands.		
HARAPOSA ...	22/6	2/6
Nut oil shampoo.		
COCONOIDS ...	31/6	3/6
For figure development.		

### The Products of

Messrs. PARKER, BELMONT & CO.

CLYNOL BERRIES	36/-	4/-
For obesity.	58/6	6/6
SOFT PALERIUM...	45/-	5/-
For wrinkles.		
LIQUID NAIL POLISH ...	10/-	1/-
Brilliant and lasting.		

Stocked by ALL Wholesale Houses.

### COLONIAL DEPOTS AND AGENCIES.

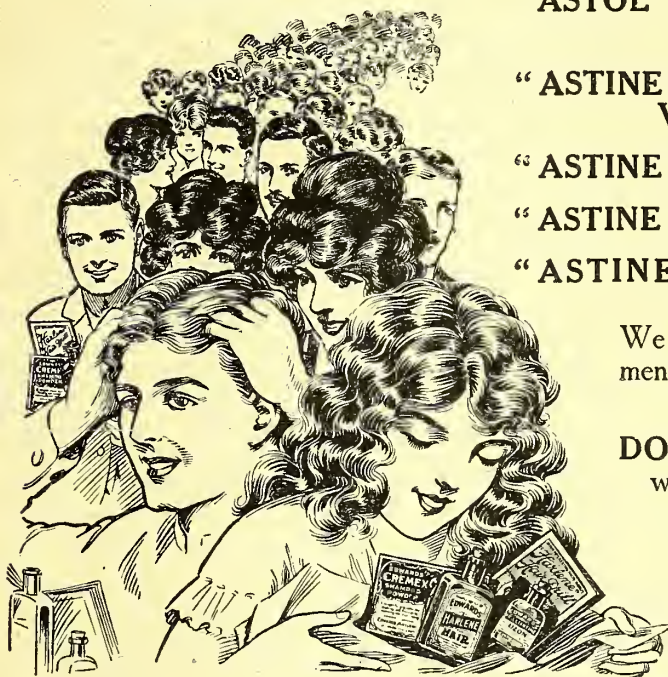
*Australia:* ALL WHOLESALERS, & DEARBORN (Australia), Ltd., Grace House, Clarence Street, Sydney.  
*South Africa:* LENNON Ltd, Cape Town, etc.  
*SIVE BROS. & KARNOVSKY, Johannesburg.*  
*India:* FRAMJEE & SON, Bombay.  
 SMITH, STANISTREET & CO., Calcutta.  
*New Zealand:* SHARLAND & CO., Auckland & Wellington.  
*South America:* DEARBORN (South America), Ltd., Calla Salta 264, Buenos Aires  
*Straits Settlements & Federated Malay States:* MEDICAL HALL, Ltd., Singapore.



**A MILLION FREE GIFTS**  
*are making "Harlene" customers for YOU!*

# EDWARDS' HARLENE TOILET SPECIALITIES

FOR  
**30 YEARS**  
 THE PREMIER  
 PREPARATIONS  
 FOR ALL TOILET  
 NEEDS



"HARLENE" FOR THE HAIR  
 "UZON" BRILLIANTINE  
 "CREMEX" SHAMPOO POWDERS  
 "ASTOL" FOR GREY HAIR  
 "ASTINE" VANISHING CREAM  
 "ASTINE" TOOTH CREAM  
 "ASTINE" SHAVING STICK  
 "ASTINE" NAIL CREAM

We have convinced millions of  
 men and women of the merits  
 of our products.

**DON'T BE "SOLD OUT"**  
 when they come to you.

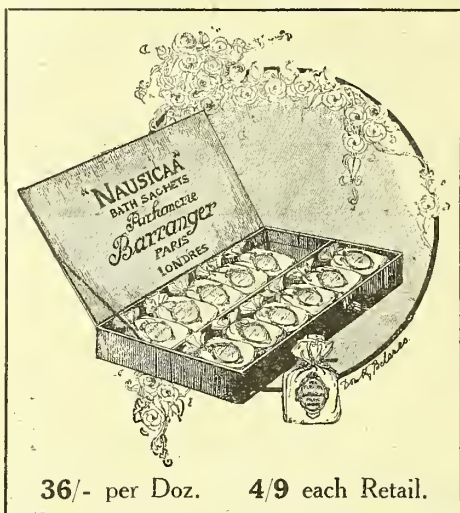
**REPLENISH  
 YOUR STOCK  
NOW**

FOR PARTICULARS, TERMS, ETC., WRITE—

**EDWARDS' HARLENE LIMITED,**  
 20, 22, 24 & 26 LAMB'S CONDUIT STREET, LONDON, W.C.1



# FOR YOUR EARNEST CONSIDERATION



## The Parfumerie Barranger

Offer the best that it is possible to produce,

And at competitive prices.

We advertise extensively,

Guarantee a substantial profit

And protect retail prices.

A perusal of the many complimentary letters from "Barranger" enthusiasts will convince you of these facts.

WRITE OR CALL FOR SPECIAL TERMS TO THE

**PARFUMERIE BARRANGER** 34 BUCKINGHAM PALACE ROAD  
LONDON " " " S.W.1.

## "SAMBOY" HAIR TONIC

is made from the purest materials which combined, provide a genuine tonic, unrivalled in its beneficial effect upon the hair and scalp. It is called "a wonderful grower," and may be used by young and old without harm; is especially good in relieving irritation, and cleansing the scalp. It preserves the colour of the hair.

*To be obtained from maker on sale or return terms, but is a ready seller. Everyone likes "Samboy."*

**"SAMBOY," 22 STRAND, RYDE, I.W.**



(Sole British Agents),  
15a WHITCOMB STREET, LONDON, W.C.2

# Hypatia Soap

THREE SIZES

P.A.T.A.  
PROTECTED  
PRICES

Bath ..	..	9d.
Toilet ..	..	5d.
Visitors ..	..	2½d.

THE LAST WORD IN PERFUMED SOAP.  
EACH TABLET WRAPPED IN CELLOPHANE.

*Write for Samples to*

**R. WHEEN & SONS, LTD.**

*Toilet Soap Makers.*

**LONDON, S.E.8.**



# GOLD

is the recognised standard of value throughout the civilised world

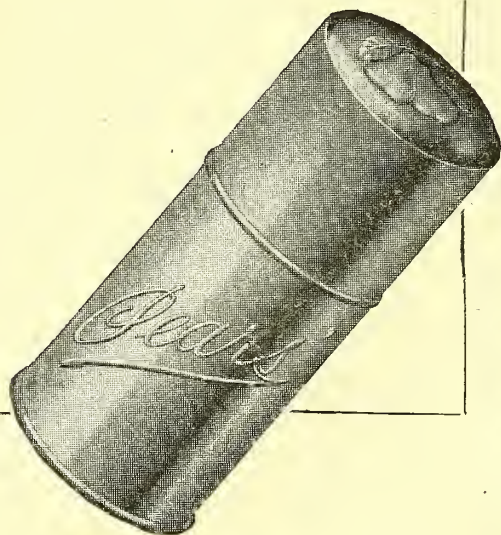
With that fact in our minds we decided to market the famous Pears' Golden Series. We wished the containers of that Series to be an outward expression of the excellence of their contents, so we selected Gold.

## *Pears* 'White Opaque SHAVING STICK

is one of *Pears* Golden Series.

IT sells again and again, where other sticks only sell once, because it is the perfected product of over 130 years' experiment and experience. You and your customers have the name Pears as a guarantee of satisfaction.

Pears' Shaving Stick has been on the market a shorter time than most of its competitors, but it has leapt into first place in popularity because we waited until we were quite sure we had produced an article of supreme character.



A. & F. PEARS, Ltd.,  
71-75, New Oxford St.,  
LONDON, W.C.1,



## IMPORTANT NOTICE TO THE TRADE BY ROBARTES (1922) LTD.

Members of the P.A.T.A.

¶ The proprietors of the well-known toilet preparations, namely, Decoltene, Dinkie and other Diadem specialities, are arranging a huge advertising campaign appealing approximately to 4,000,000 ladies per week, and chemists should stock up these lines against certain heavy demands.

¶ With the change of proprietorship the manufacturing organisation is the finest in the Kingdom, and each Diadem line is manufactured by highly qualified and thoroughly competent chemists. The new Decoltene and Dinkie will be a revelation to both user and stockists.



THESE LINES SHOW AN "ON COST" PROFIT <sup>OF</sup> ABOUT 67%

	P.A.T.A.	TRADE TERMS
DECOLTENE. The New Liquid Hair Remover	3/9	30 = doz.
DINKIE. The Dainty Deodorant.	2/6	20 = "
DIADEM VANISHING CREAM. A new and improved formula	3/9	30 = "
DIADEM COMPLEXION WAX. An improved night cream	2/6	20 = "
DIADEM FACE POWDER. All popular shades	2/6	20 = "
DIADEM TALCUM POWDER	1/3	10 = "

### FURTHER DISCOUNTS AS FOLLOWS:

As a further inducement to stock these lines against the heavy demand created by our press campaign, the following liberal discounts are offered  
(Subject to 14% cash, 7 days):

On £3 parcels, 5% discount extra.  
On £5 parcels, 7½% " "  
On £10 parcels and over, 10% " "

Artistic show cards and other advertising matter for window displays liberally supplied. Send your orders at once.

**ROBARTES (1922) LTD.,** HAZLITT HOUSE, SOUTHAMPTON BUILDINGS,  
HIGH HOLBORN, LONDON, W.C.1.

## BEAUTY IN A CRATER

**KemOlite**

Natures' Own Radio-Active Beauty Aid.

Show it with  
**POWDER & CREAMS**  
and build up Accumulative Repeat Sales.  
**TERMS:** Selling Price 6/6  
Trade Price 54/- per dozen.  
**£600 PRIZE CONTEST**

Write for particulars. Chemists' Sales Agents:  
For the Midlands and North also Scotland,

**PENNEY & CO.**

Bigg Market, Newcastle-on-Tyne.

For London and the South including  
South Wales and the Eastern Counties,

**SELLING SERVICE, LTD.**

Cavendish House, 20 Old Cavendish  
Street, London, W. 1

and all Wholesalers.

OUR

## SPONGES

AGAIN

Considerably Reduced  
in Price.

Competition Defied.

WRITE FOR SAMPLES AND PRICES  
OR CALL AND INSPECT OUR STOCK.

New Showrooms and Warehouses:  
25 FINSBURY ST., CHISWELL ST.,  
LONDON, E.C.2.

Telephone - - - CLERKENWELL 5428.

The  
**Sponge Fishing & Importing Co., Ltd.**

(Société Anonyme pour la Pêche et l'Importation des Eponges)

Incorporated in Belgium.

Buying Branches at *Stax, Tripoli, Kalymnos-Symi, Hydra, Batabona, Nassau and Florida.*

Selling Branches at *Brussels, Paris, Barcelona and Hamburg.*

No connection whatever with any other Firm.





**Why do you allow them to suffer in silence?**

## When you can guarantee to remove SCURF & DANDRUFF

positively without risk of failure every time, no matter how bad or long standing the case may be, by handing them a 2/6 bottle of Dr. Page-Barker's specific. The makers stand behind its efficacy, and empower you to refund without question the 2/6 if unsuccessful. Acquaint these silent sufferers of this grand eradicator now.

Splendidly put up, top-hole cards, compelling leaflets go with all orders, and sales commence directly material is shown.

Based on 3 dozen order (with 3 x 2/6 bottles as Bonus), the proposition is

You Pay out of your Till	You Put into Your Till	YOUR PROFIT IS
3 doz. at 18/- £2 14 0	36 Bots. at 2/6 £4 10 0 3 Bonus at 2/6 7 6 (free)	44%
£2 14 0	£4 17 6	Selling - - £4 17 6 Cost - - £2 14 0
		£2 3 6

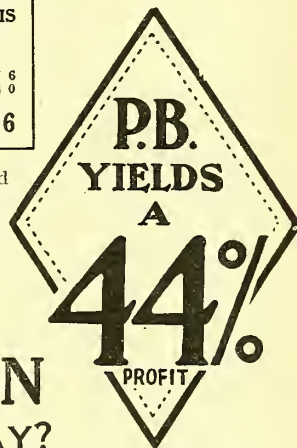
There are hundreds who pass your window and amongst your own clientele who go daily in fear of unfavourable comment on the appearance of scurf on their clothing, and suffer accordingly. Tell them about P.B., earn their lasting appreciation and incidentally "till" a 44% P.A.T.A. profit. There is no substitute for P.B. because P.B. never fails.

THOS. CHRISTY & CO., 4-12 OLD SWAN LANE, E.C. 4, distribute

DR. PAGE-BARKER'S

## SCURF & DANDRUFF LOTION

WHY NOT DROP A POST CARD TO-DAY?



Parfumerie

*Bourjois*

Paris

## Poudre de Riz de Java

No. 45

10/- per doz.

P.A.T.A.

1/3 per box.



No. 495

7/- per doz.

P.A.T.A.

10½d. per box.

No. 45.

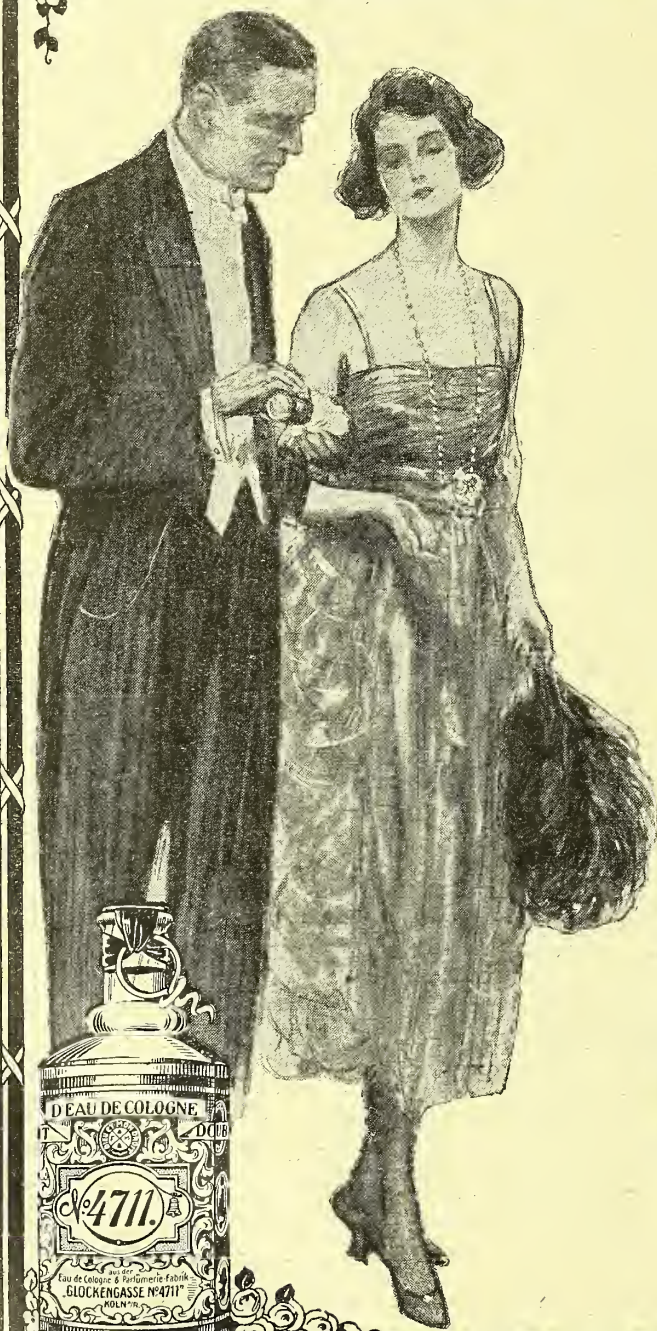
Made in the following tints : RACHEL, NATURELLE, BLANCHE, ROSE and BRUNETTE.

A. Bourjois & Cie, Ltd., 66 Carter Lane, London, E.C.4.

Also Manufacturers of the celebrated "ASHES OF ROSES," No. 2, 15/- per doz.; P.A.T.A. 1/9 per box.



# **N°4711. Eau de Cologne**



## EXTRACT FROM LETTER

*received from customer carrying on a high-class business in a large Midland town.*

The letter was received quite recently, and only three weeks after he had been supplied with a parcel amounting to about £66 retail value:

“Since making our display of ‘4711’ we have sold nearly all, and are quite out of the 2/6 size. Will you please send us the following as soon as possible, terms as before.”

Here follows an order amounting to £50 retail value.

“4711”

backed up by unequalled quality and extensive advertising is bound to bring you business, and it will always satisfy your customers.

*Sole Importer—*

**R. J. REUTER**  
69 Carter Lane, E.C.4



# Announcing the Result of the CUTEX

## Beautiful Hands Competition

THE Proprietors of Cutex have pleasure in announcing the names and addresses of the principal prize-winners in their recent Beautiful Hands Competition.

Owing to the great number of entries received and the general excellence of the photographs submitted, it has proved no easy matter for the Adjudicators to select the winners. After very careful consideration, the cash prizes have been awarded as follows:

**First Prize of £100***Awarded to*

Miss H. Brown,  
"Roseville," Annerley  
Road, Bournemouth.

**Second Prize of £10***Awarded to*

Miss Lallie N. Owen,  
374 Cowbridge Road,  
Cardiff.

**Third Prize of £10***Awarded to*

Mrs. Beatrice C. Lewis,  
6 Buxton Road,  
Weymouth.

**Fourth Prize of £10***Awarded to*

Miss Maud Gardiner,  
29 Brondesbury Villas,  
Kilburn, N.W.5.

**Fifth Prize of £10***Awarded to*

Miss M. Armstrong,  
8 King's Road, Spalding,  
Lincs.

**Sixth Prize of £10***Awarded to*

Miss M. Manners, 98, Upper  
Tulse Hill, Brixton Hill,  
S.W.2.

## A Special Gift of 300 Consolation Prizes,

*Not Contemplated When the Competition Was Announced.*

IN order to show their appreciation of the intense interest which this Competition has aroused the Proprietors of Cutex have now decided to award 300 Consolation Prizes of Cutex Manicure Sets to the senders of the next best photographs. These prize-winners are being duly notified through the post, and a beautiful Cutex Manicure Set is being sent to each of these 300 Competitors.

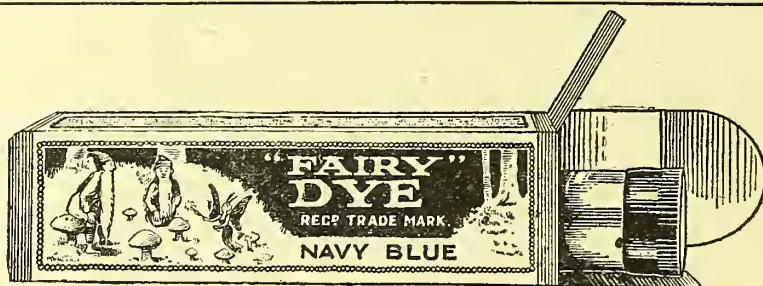
The result of the Competition has proved conclusively that Cutex is considered an absolute toilet necessity by thousands of men and women throughout the country, and the Proprietors are grateful for the many hundreds of letters of appreciation which have been received along with the photographs.

**NORTHAM WARREN, 4 & 5 LUDGATE SQUARE, LONDON, E.C.4.**

English Selling Agents

**HENRY C. QUELCH & COMPANY.**





## FAIRY DYES

Mean Greater Turnover for You—and Absolute Satisfaction for Your Customers.

THERE is no more attractive line on the market to-day—there is no better seller—and no article has made larger strides in popular favour.

## FAIRY DYES

are now sold in glass tubes, encased in smart, clean-looking "safety-first" cartons. They are retailed at 2d. each, made in 25 popular shades and colours, and are extensively advertised in the right publications.

You can rely upon Fairy Dyes—for prompt delivery in any quantities—for fresh stocks—for quick, easy-to-handle, clean turnover, and as tried favourites your customers are always satisfied. See that you are supplied without delay.

For Trade Terms and particulars write to

**FAIRY DYES, LTD.,**

London Depot

**37-41 GLASSFORD ST.,  
GLASGOW.**

292 UPPER STREET, ISLINGTON, N.1.

## G. B. KENT & SONS, LTD.

Are known the World over as  
the Largest Manufacturers of

**BEST  
BRITISH  
BRUSHES**

Please write for full Particulars to—

**75 Farringdon Road, E.C.1.**

## PERFUMERS—SAVE LABOUR!

Headquarters for:

Vanishing Creams, Shampoo Powders, etc., in bulk or packed. Samples and prices on request. Makers of the "O-Pine-O" Toilet and Household Soaps. The special feature of these soaps is that they contain all the natural Glycerine.

A trial will convince as to the very high quality of these goods.  
"O-PINE-O" MFG. CO., LTD., Montague Rd., Hornsey, London, N.8.

## VAL-ROSA VANISHING CREAM

To be largely advertised in ladies' papers and "The Tatler."

**12/- PER DOZ. 1/6 PER POT RETAIL.**

A really high class cream.

**THE VAL-ROSA CO., 53 Kirkstall Rd., Leeds.**

## Talcum Powder

⊙ OF ALL GRADES ⊙  
FOR ALL PURPOSES

FOR SAMPLES AND PRICES APPLY TO:

**W. Harrison & Co., Ltd.**

**16 MINCING LANE, LONDON, E.C.3;**

And at

**14 MARKET PLACE, MANCHESTER.**



# JAKSON'S PEPPERMINT, LAVENDER & CAMOMILE OILS are the BEST.

Produced and Prepared by  
**THE LARGEST GROWERS & DISTILLERS  
IN ENGLAND.**

*Distillery :*  
**J. JAKSON & CO. (Mitcham Rd., 1921), LTD.**  
Mitcham Road, WEST CROYDON.

*AGENTS for the U.K. :*  
**F. NEWBERY & SONS, LTD.**  
27 & 28 Charterhouse Square, London, E.C.1

Genuine Nice

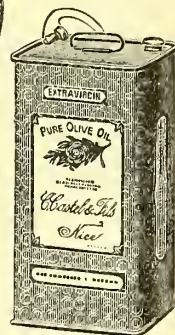


OLIVE OIL



**CASTEL'S**  
Genuine Nice  
**OLIVE OIL**

In buying Castel's Olive Oil, you buy best Nice Oil only—guaranteed fully by the refiners, a firm with a big reputation, established in Nice for 122 years. There is no Oil better—few as good.



*Write to-day for New Season's Prices.*

*Rayner & Co. Ltd.*  
Stocks in London,  
Liverpool and Glasgow.

**NORTH ROAD - LONDON, N.7.**

**DODGE & OLCOTT CO.,** 20 MARK LANE, LONDON, E.C. 3.

THE "D & O" BRAND  
*is the "Standard of Quality" for*

OILS of BAY, CEDARWOOD, PATCHOULI, PEPPERMINT,  
SASSAFRAS, ETC.

BALSAMS of Copaiba, Peru, Tolu.  
TONKA BEANS, Angosturas.

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"EGDARF, FEN, LONDON."

**Aromatic Chemicals      Flower Oils**  
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H. RAAB & CO., ROERMOND, HOLLAND.

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Telegrams: Raab, Roermond.

Telegrams: Whaiter, Bilgate, London.



# SOLUBLE QUININE PESSARIES

The "SAFEGUARD" Brand.



The "Safeguard" Pessaries (of which we are sole proprietors) are compounded according to a formula which experience has shown to be absolutely the best for the purpose. Nothing but the purest drugs being used in them, they never fail, and can be recommended to customers with the utmost confidence.

			£	s.	d.	
PRICES	1 dozen in box, with directions	..	per dozen boxes	1	0	0
	" " in 3 dozen lots	..	" "	19	6	
	" " in 6 "	..	" "	19	0	

*Special Quotations to Shippers and Wholesale Dealers.*

**CARRIAGE PAID ON ORDERS OF £3 AND UPWARDS.**

A discount of 5 per cent. for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for New Price Lists of Druggists' Sundries, Toilet Requisites, Rubber Goods, Cut Sheet Rubber Appliances, etc.

## BURGE, WARREN & RIDGLEY, LTD.

91 & 92 GREAT SAFFRON HILL, LONDON, E.C.1.

## ENEMAS

Unpolished red all rubber.  
Guaranteed perfect.

**18/6** per doz.

Boxed and complete with fittings.

3 doz. at **18/-**, carr. paid,  
with 2-colour showcard,  
size 8" x 10".

APPROVAL.

**E. & G. H. COLVER**

*Manufacturing Chemists,*

23 Ryland Rd., Edgbaston, Birmingham.

## AVOID DELAY

BY PLACING YOUR ORDERS

**NOW**

FOR

**BATHING CAPS**

**SPONGE BAGS**

**HOLDALLS**

OUR LATEST PATTERNS AND  
PRICES SENT ON APPLICATION

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Phones: Clerkenwell 1347, 1348, 1349 (Private Exchange).



# Surgical Dressings

*Packed to suit  
Customers'  
requirements.*

*Special Quotations  
for Large Quantities.*

## BANDAGES

OPEN WOVE  
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DOMETTE  
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PLASTER OF  
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## ABSORBENT GAUZES

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OILED SILKS  
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G. P. TISSUE

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Contractors  
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Inquiries and Correspondence Invited.

WHOLESALE AND EXPORT ONLY.



A SATISFIED CUSTOMER IS THE CHEMIST'S BEST ADVERTISEMENT

# The Marvel Whirling Spray Syringe



Gold Medal Awarded, Paris, 1902,  
by the Société d'Hygiène de France

as the latest and best improvement in Vaginal Syringes. Particular attention is called to the fact that by reason of its peculiar construction the Marvel Syringe dilates and flushes the vagina with a volume of whirling spray, which smooths out the folds and permits the injection to come into contact with and cleansing the entire surface.

Fully Protected by Patents.



IT IS A MARVEL



You can safely recommend it.

Has no rival on the market, is well advertised, pays a good profit, quality guaranteed. The MARVEL is returnable for exchange if found defective and reported promptly.

Trade price, 125/- per doz.

Retail price, 15/- each.

**FASSETT & JOHNSON, Ltd.**  
86 Clerkenwell Rd., London, E.C.1.

## A BIG REPEATER.

Sells on sight. Gives Satisfaction. Pays well.

## The "EVERSAFE" BABY PACIFIER

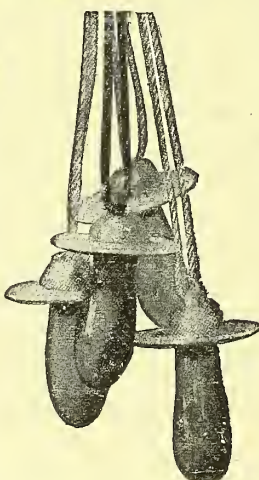
Pure jelly filled, non-collapsible transparent nipple. The "Eversafe" is the Pacifier that is **Different**, and it is still on Top. Perfect quality and workmanship. Baby's delight and Mother's favourite because she knows it is safe—baby cannot pull it apart.

Patented everywhere.

Present Rates :

No. 2	4d. line	2/9 doz.
" 2C	6d. "	3/2 "
" 2E	6d. "	3/4 "
" 3	7½d. "	4/8 "

Sample order, 3 doz. assorted :  
Send 10/6, post free.



Obtainable from all wholesalers  
or direct from Patentees.

**F. SCHUTZE & CO., LTD.**  
BLACK BULL WORKS, LONDON, N. 7.

## WILSON (RUBBER) GLOVES

(Advertised in "The Lancet.")

SURGICAL, OBSTETRICAL, AUTOPSY, ACID, ELECTRICAL (10,000 volts), HOUSEHOLD. FINGER COTS.

### SUPPLIES BY RETURN from STOCK

Enquiries (Wholesale and Export) to :—

The only accredited Agent  
in Great Britain for  
THE WILSON RUBBER CO.,  
CANTON, O., U.S.A.  
The largest exclusive manufacturers of rubber gloves in the world

**R. S. BLAKER,**  
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SOUTHAMPTON.



# STUBBS

Highest Grade  
Compressed

## CLOTH BALL

white and all colours  
Samples & Prices (P.A.T.A.)

from 6 Crystal Palace Park Rd.  
Sudenhams London, England



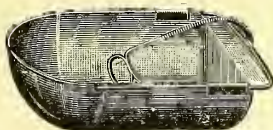
# “SANIX”<sup>Regd.</sup>

## THE MODERN BIDET

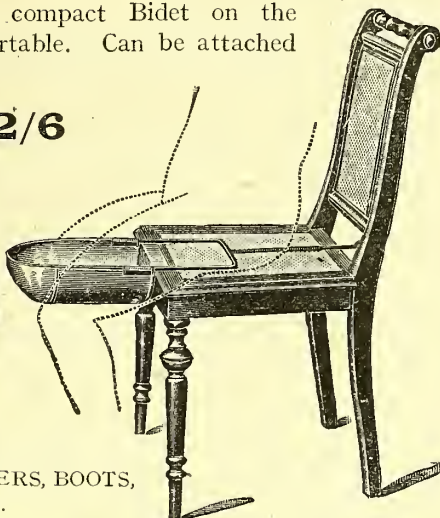
The most simple and compact Bidet on the market. Light and portable. Can be attached to any ordinary chair.

**PRICE 12/6**

Literature and show cards for distribution supplied.



Folded.



Stocked by:—

Messrs. MAWS, SANGERS, BOOTS,  
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WHOLESALE AND  
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DOUCHES,  
BRUSHES,  
WILLOW BOXES,  
OINTMENT POTS,  
SYRINGES,  
ETC., ETC.



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For all cases where support, elasticity and durability are needed.  
:: Rubberless and washable. ::  
All widths up to 11 inches.

**Wholesale only.**

Sole Manufacturers:

**GROUT & CO., Ltd., Gt. Yarmouth.**

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**T. S. Eastaway, 35 Wood Street, E.C.**

We are the Actual Makers



# “BULL DOG” Boracic Socks

Finest 4½d. Sock.  
Quickest and Largest Sale.  
**BIGGEST PROFIT**  
Retail at 4½d. per pair.

**“SPEEDWELL” Boracic Socks**  
Retail at 6½d.

*Sample Pair and Special Offer.  
Terms on application.*


**R. H. ALLÈN & CO.,** MANUFACTURING CHEMISTS  
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The **"TOINOCO"** (Regd. Trade Mark)  
**CLINICAL THERMOMETER**  
**WILL INTEREST YOU.**

It is the only Clinical Thermometer with which a Kew Certificate is given Free.

 This enables Customers to answer complaints about inaccuracy with a confidence hitherto impossible.

On P.A.T.A. at fixed retail prices. Produced under the direction of  
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India Rubber Manufacturers,

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**RUBBERFABRIEK HOLLAND**  
**VELSEN, HOLLAND.**

Trade Mark  
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TEATS, SOOTHERS, RUBBER GLOVES, SURGICAL RUBBER GOODS.

Samples and Quotations gladly sent by **ENGLISH REPRESENTATIVE, 35 NEW CAVENDISH STREET, W.1.**  
**THE VIPER & RE-COVERING CO., LTD., 7 & 8 POULTRY, E.C.2.**



**KNOWN ALL OVER THE  
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 STANDARD LIQUID  
 PLASTER.**

**TRADE PRICES.**

Retail Price.		Trade Price.
10½d. Pocket Size...	... ..	8/5 doz.
2/- Medium Size ...	... ..	19/2 "
3/- Physician's Size ...	... ..	28/9½ "

£3 and up Carriage Paid.

Order through your wholesaler or direct

Sole Agent for British Isles and Colonies—

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**96 Southwark Street, London, S.E.1.**

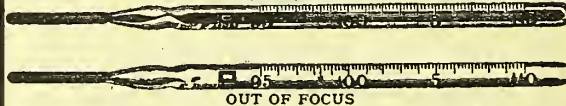
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**Clinical Thermometer**  
*The REPELLO* requires no shaking down

A 30-second pushed back in an instant.



**NEW IMPROVED  
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The only Easy Reading Magnifying Clinical on the Market.  
 IN FOCUS



The square mark engraved on lens front locates the Mercury column immediately.

SPECIAL AWARD AND GOLD MEDAL, NEW ZEALAND, 1907.  
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**All Clinical Thermometers are supplied N.P.L. Tested unless otherwise ordered.**

**G. H. Zeal, Ltd.,** 77 St. John Street, Clerkenwell, London, E.C.1.

Established 1888.

Wholesale Manufacturers of Clinical Thermometers.  
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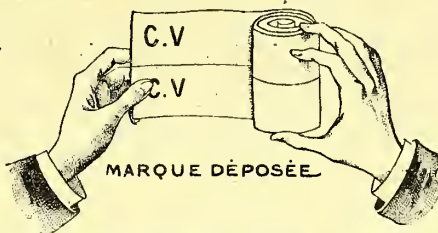
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Crêpe

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Bandages



Crêpe

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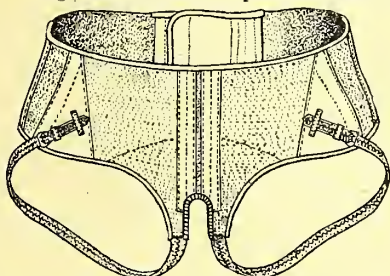
Bandages

## THE R. H. HEWARD COMPANY

SURGICAL APPLIANCE  
MANUFACTURERS

CROWN ROAD WORKS, TWICKENHAM

have the honour to announce to the Trade that they have acquired the Sole Agency for the United Kingdom of Great Britain, Ireland and the British Dominions of **The Celebrated Crêpe Velpeau Bandages** so largely sold before (and which practically disappeared from this country during) the Great War. These Bandages are so well known to the Trade that it is unnecessary to speak of their high quality and reputation, or to emphasize their superior merits. We are carrying large stocks and shall be pleased to forward prices and samples on application, packed in the original French wrappers and cartons.



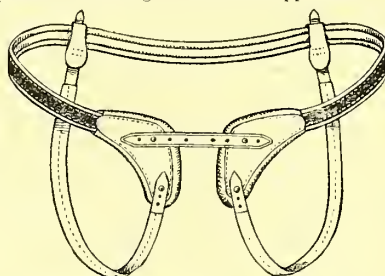
MADE IN TWO QUALITIES ONLY.

BANDAGES: Nearest English width,  
2, 2½, 3½ inches.  
Width in Centimeters, 4-5, 6-7, 9-10.

ABDOMINAL BINDERS (Only made  
in First Quality): 6, 8, 12 inches,  
Width in Centimeters,  
14-15, 18-20, 28-30.

1st Quality—RED LINE.

2nd Quality—BLUE LINE.



## Cellulose Wadding

Highly bleached, Quality second to none

Rolls or Sheets in any size or  
thickness to order.

Rolls of 1 lb., 14 in. wide, 12 ply,  
in bales of 1 cwt., always in stock.

**OWEN SHIRLEY,** 124/127 Minories,  
LONDON, E.I.

Sole Consignee for Papierfabrik Sacrau, Breslau.



## Bathing Caps

AT REDUCED PRICES.

When ready to buy—please  
ask us for Samples on approval—our prices are right and  
good Selling Patterns.

Forty-five Years in the Rubber Trade.

ENEMAS, complete, from 18 6 doz.  
and SURGICAL RUBBER GOODS  
of all kinds.

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ESTABLISHED 1877.

Phone : " " Clerkenwell 3774

## Display these on your Counter

A trial purchase ensures a regular customer

12 Perfect Blades  
in every  
doz.



They have a super keenness that ensures perfect service and makes them different from and better than all others

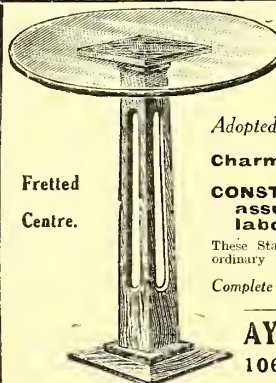
The easy Blade  
for tenderskins

Manufactured by—  
**JOHN WATTS**  
Dept. 3,  
Lambert Works,  
SHEFFIELD

Established over 130 years

London : 24 Redcross  
Street, E.C.1.

RETAIL PRICE **3/6** PER DOZ. ALLOWING 50% PROFIT ON COST TO THE DEALER.



## OAK PEDESTALS

AND  
Plate Glass Shelves

Adopted by Leading Window Dressers

Charming and Artistic Effects

CONSTANT CHANGE OF SHOW  
assured. Window-dressing  
labour more than halved.

These Stands can be used in conjunction with  
ordinary rows of Window Shelves if desired.

Complete Sets 27 6, 50/-, 81 6, 96 6 & 97 6

**AYRTON-GRAHAM, Ltd.**

106 Duke St., LIVERPOOL.



# CONTAINERS

**VICKERS LIMITED** are specially engaged at their Erith Works, Kent, in the design and manufacture of the most up-to-date plant for making all kinds of pilferproof shipping containers.

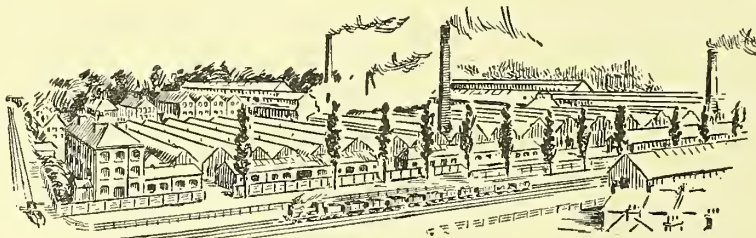
This form of container is lighter and stronger than a wood case—also more convenient as it can be stored in the flat and made up as required. It will also be found to be cheaper. Vickers Limited are in the position to give free advice as to plant and can now supply the machinery.

ERITH.

Department No. 75

KENT.

Telephone:  
ERITH 68.



Telegrams:  
VICKERS  
ERITH.

## HARVEY'S

Watts' Embrocation, or Curb Bottle.  
Aconite Powders.  
Worm & Condition Powders.  
Watts' Red Lotion.  
Hair-Restoring Ointment  
Edos, or Tasteless Purging Powder.

## HARVEY'S Great Remedies for the Horse

Protected Prices  
(P.A.T.A.)

### HARVEY'S

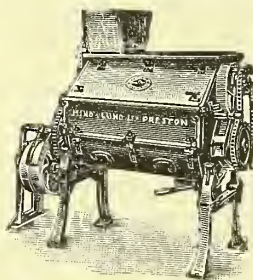
Koppos Powder.  
Parasiticide.  
Thrush Specific.  
Hoof Ointment.  
Hair Restorer (Human)

Of all the leading Druggists' Sundries Houses.

**HARVEY & COMPANY, Ltd., Dublin.**

## "ATLAS" PATENT SIFTERS & MIXERS

Combined or Separate Machine.



Sifters fitted with adjustable brushes. Our patent agitator distributes the material evenly to every part of the Pan, producing a most intimate mixture.

**HIND & LUND,  
LTD.  
ATLAS WORKS,  
PRESTON.**

Established 1791. (4)

## BRITOL PREPARATIONS

A QUICK SELLING LINE  
with GOOD PROFITS

**BRITOL DEATH TO MOTHS**

The only actual  
safeguard against moths.

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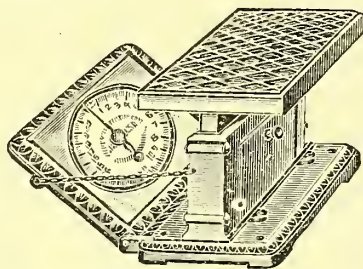
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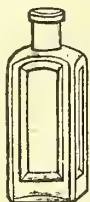
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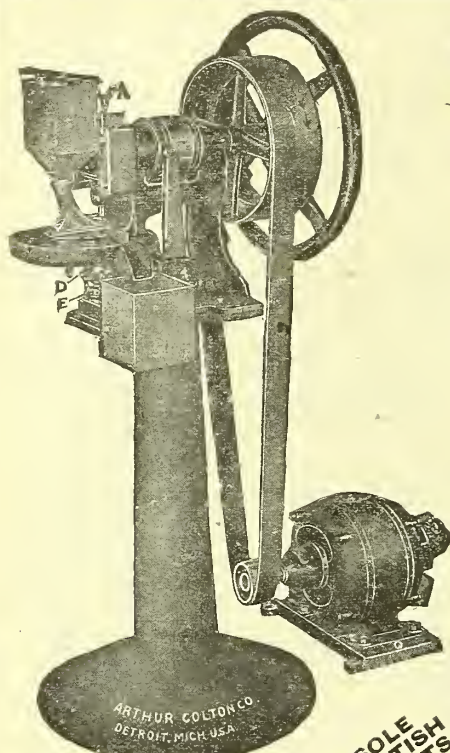
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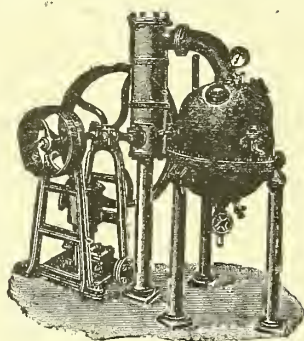
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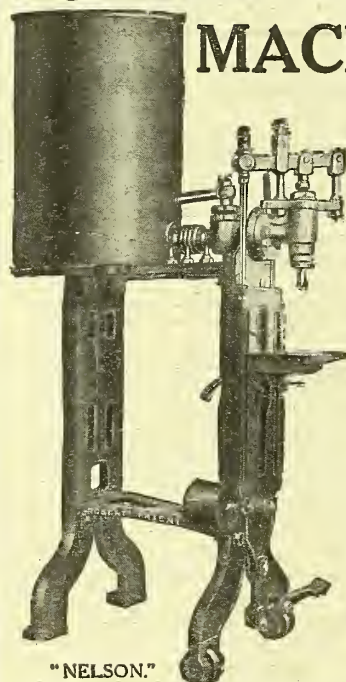
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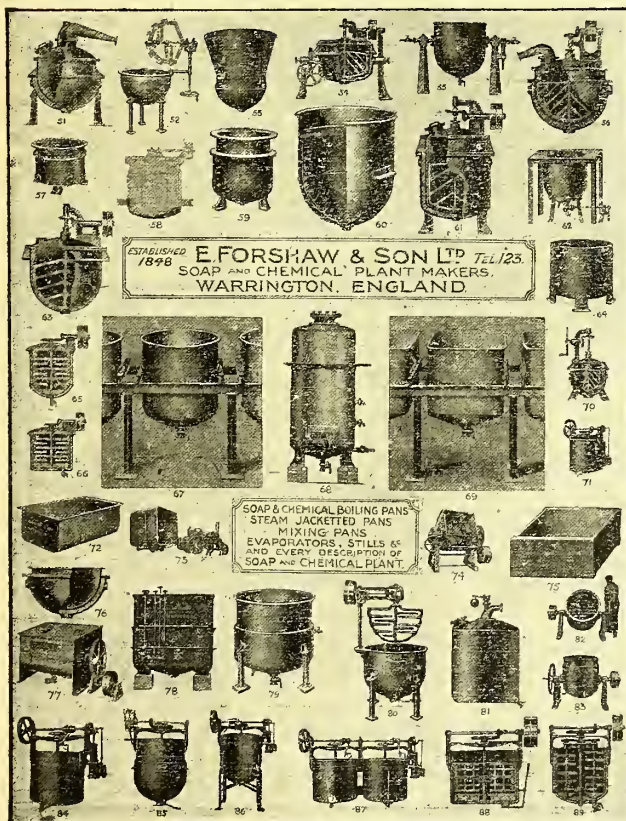
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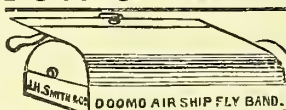
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### C. & D. Stock-taking Sheets

THOSE chemists whose financial year closes at the end of March, and who require to take stock, should note that the *C. & D. Stock-taking Sheets* halve the labour of taking stock. The items are arranged on ruled paper in the same order as in the *C. & D. Retail Price List*, which is afterwards employed for pricing out the articles, the amount of each column being then transferred to specially ruled pages at the end of the pad. Hints on stock-taking are given on the inside of the cover. The items in the *Stock-taking Sheets* cover all drugs, chemicals and galenicals found in chemists' shops, and, being in alphabetical order, are easily found for entering up. By means of the *Stock-taking Sheets* one person can take stock, but it is better for two assistants to work together, the more experienced calling out the quantity of the drug, etc., and the other entering it in the *Stock-taking Sheets*. The price of the complete pad of *Stock-taking Sheets* is 2s. 6d., post free, cash with order.

## English and Welsh News

The Editor would be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

### Summer Time

The Home Secretary gives notice that the period of summer time (fixed by the Summer Time Act, 1922) will begin this year at 2 o'clock, Greenwich mean time, on the morning of Sunday, April 22, and will continue until 2 o'clock, Greenwich mean time, on the morning of Sunday, September 16.

### Contracts

The following tenders have been accepted by the bodies named:—

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Faversham Guardians.—T. J. Thomas, chemist and druggist, drugs, etc.,

Faversham Rural District Council.—Mr. E. Withers, chemist and druggist, drugs, etc.

Luneside Hospital, Lancaster.—Bate & Gorst, chemists, drugs.

Newcastle-under-Lyme Guardians.—Mr. W. Poole, Ph.C., drugs.

Portsmouth Guardians.—Corbyn, Stacey & Co., Ltd., drugs; B. Pratt & Co., lint, etc.

Romsey Guardians.—Mr. F. Oram, Ph.C., dressings.

Whitby Guardians.—Mr. W. Ruff, chemist and druggist, drugs, etc.

### Testing Prescriptions

The current report of the Public Health and General Purposes Committee of the Middlesex County Council contains the following remark on the testing of prescriptions under the Sale of Food and Drugs Acts:—

"In two cases your Committee have decided that cautions shall be sent. In a mixture there was the correct quantity of potassium bromide, but a substantial deficiency of ammonium carbonate. This chemical, however, is stated in the British Pharmacopœia to be a variable and volatile compound. In the remaining instance, an eye lotion which, according to the prescription, should have contained 20 grains of boric acid in each fluid ounce, contained 15 grains only. The county analyst points out, however, that at ordinary temperatures not more than 17.5 grains of boric acid will remain in solution in a fluid ounce of water, and the chemist was possibly justified in not sending out a lotion containing a sediment of undissolved boric acid."

### Birmingham

Easter Holidays will be on the same lines as last year in both wholesale and retail.

Several pharmacists were to be seen at the recent meeting of the local branch of the Property Owners' Association.

Dr. J. O. Tunstall, M.D., Sutton Coldfield, who died leaving estate valued at £26,107, bequeathed his niece, Nina Louisa Osborne, £2,000 "for her loyal services as dispenser and bookkeeper."

Charles Williams & Co., drysalts and manufacturers, have removed from Broad Street to Summer Row, the property having been acquired by the Corporation for improvements and street widening.

Advertisements for lady pupils have appeared in three different areas lately offering thorough training at premiums ranging from £20 up to £30. The analyst has also entered the field again and requires a premium.

### Harrogate

There is a distinct brightening up in the pharmacies of the town with a view to Easter and the coming season, which is expected to be up to the standard of any of its predecessors.

Mr. F. Pickles has opened a new pharmacy to serve the Bilton end of the town, and Mr. H. C. Hines has also opened a new establishment in Mayfield Grove. Mr.



Leo. Benjamin has taken premises in King's Road, and hopes to commence business by Easter.

Mr. G. Pattison, Station Parade, has enlarged and improved his shop so that now he has one of the finest private chemists' shops in the North of England. New fronts have also been put in at the premises of Mr. P. Ridge, Westmoreland Street, and Taylors' Drug Co., Ltd., Beulah Street.

### Liverpool

The Easter holiday will conclude in all branches of the trade on Monday evening.

Several pharmacists were seen in their autocars *en route* for Aintree on the Grand National Day.

The pharmacy long carried on by the late Mr. Casey in Paradise Street has been sold to a Birmingham pharmacist.

Members of the Merseyside and Southport Pharmacists' Masonic Association have received an invitation to visit the Duke of Edinburgh Lodge on April 12.

At least sixty acceptances for the forthcoming complimentary dinner to Mr. and Mrs. W. J. Williams (*C. & D.*, March 24, p. 392), for which Mr. and Mrs. A. J. Ferriday are acting as honorary secretaries, had been reported at the time of going to press. The "Liverpool Daily Post" of March 23 contained a brief account of Mr. Williams's career.

Mr. W. H. Saunders has been elected President of the Liverpool Philomathic Society, a society founded in 1824 for the purpose of discussing philosophical, literary and political subjects. The retiring President is Lieutenant-Colonel Buckley, M.P. for Waterloo, who has just succeeded Sir William Joynson-Hicks at the Department of Overseas Trade.

### Manchester

Mr. F. G. Haworth, general manager of Edward Taylor, Ltd., plaster manufacturers, Salford, who has been seriously ill for a considerable period, is now convalescent and, we are informed by Mr. D. Dixon (who has resumed the management of the London branch), hopes to return to business shortly. [Corrected note.]

The first meeting of the Manchester and District Pharmaceutical Golfing Society will be held on April 4 on the North Manchester Golf Club's course. The competition will be for a prize presented by the President (Mr. A. J. Pidd), play to commence promptly at 2 o'clock. Members competing are requested to notify the secretary, Mr. J. A. Collins, 106 Church Lane, Harpurhey, by March 31.

### Nottingham

Trade prospects are decidedly brighter; the spell of fine weather has revived the demand for photographic apparatus.

The second lecture to commemorate the foundation of the Sir Jesse Boot chair of chemistry at the University College was given on March 23 by Professor F. S. Kipping, his subject being "Evolution in Chemical Industry: Cellulose Products."

At a meeting of the Nottingham section of the Society of Chemical Industry on March 21, Mr. L. Anderson read a paper on "A New Derivative of Salvarsan," and Dr. E. B. R. Prideaux and Mr. A. O. Bentley contributed monographs on subjects of analytical interest.

### Miscellaneous

**CHEMICAL WORKERS' WAGES.**—It is announced in the daily Press that "the drug and fine-chemical employers" have decided to reduce wages, from the first pay day in April, to the extent of 3s. a week for men and 2s. for women. Several of the employees of Burgoyne, Burbidges & Co., Ltd., East Ham, struck work on March 27.

**INQUEST.**—An inquest was held at Greenwich, on March 29, on the body of Mr. Thomas Arthur Wingfield, chemist and druggist, 9 Ilderton Road, S.E.16, who died on March 17. Medical evidence was given to the effect that death was due to alcoholic indulgence and hæmor-

rhage, and a verdict of "Death from natural causes" was recorded.

**BRITISH EMPIRE EXHIBITION.**—It is announced that United Kingdom firms desiring to exhibit in the Industrial Hall have been requested to send in their applications before March 31, and that the response has been so satisfactory that the Exhibition management have now decided to proceed to the allotment of space on April 30. It is important, therefore, that intending exhibitors should send in their applications without delay.

**IN THE COURTS.**—In the King's Bench Division of the High Court, London, on March 22 and 23, George Nye, coach painter, sued Schweppes, Ltd., and the Metropolitan Electric Tramways Co., Ltd., in respect of personal injuries received in a collision between a Schweppes' lorry and a tramcar at Hendon in July last. The action was a test one. The jury awarded Mr. Nye £1,500 damages, and found the Tramways Co. liable for the accident. A stay of execution was granted upon the usual terms.

**POISON-LICENCE APPLICATIONS.**—Middlesex County Council has adopted a recommendation of the Public Health and General Purposes Committee that the application of E. T. Gibbs, seedsman, East Finchley, for a licence under Section 2 of the Poisons and Pharmacy Act, 1908, be refused on the ground that existing facilities are sufficient. Five local chemists and the Retail Pharmacists' Union had written opposing the application. Seven existing licences (five to shopkeepers and two to assistants of licencees) have been renewed.

**WELSH COLLEGE OF PHARMACY.**—At the request of the Technical College authorities, Messrs. A. Hagon and A. S. Johnson attended at the Welsh College of Pharmacy recently to address the students on matters relating to pharmaceutical education. Attention was drawn to the fact that many prizes of varying values are offered by pharmacists for competition by the students, and medals are annually provided by the South Wales Pharmacists' Federation to the two most successful students who pass the Qualifying examination at the end of the sessions. Pharmacists throughout the South Wales area are greatly interested in the welfare of the College.

**PRIVATE ARRANGEMENT.**—The creditors of Francis Ditchfield, poultry medicine dealer, 170 Glodwick Road, Oldham, met recently, when a statement of affairs was presented by Mr. J. F. Warburton, accountant, Queen Street, Manchester. The statement disclosed liabilities of £2,318. The assets were estimated to realise £472 1s. 10d., from which had to be deducted £2 5s. for preferential claims. It was decided that the estate should be administered under a deed of assignment to Mr. Warburton as trustee. The following are among the creditors:—James Woolley, Sons, & Co., Ltd., £123; Potter & Clarke, Ltd., £20; J. Richardson & Co. (Leicester), Ltd., £88; Reliance Bottle Co., £49; Hugh Stevenson & Sons, Ltd., £22.

**THE ROYAL INSTITUTION.**—The following discourses and lectures figure among the next series to be given at the Royal Institution of Great Britain, 21 Albemarle Street, Piccadilly, London, W.1.: April 12 and 19. Professor A. O. Rankine, "The Transmission of Speech by Light."—April 26, May 3 and 10. Professor J. T. MacGregor-Morris, "Modern Electric Lamps."—May 4. Professor F. Soddy, F.R.S., "The Origins of the Conception of Isotopes."—May 8 and 15. Professor A. C. Seward, F.R.S., "The Ice and Flowers of Greenland," and "Arctic Vegetation of Past Ages."—May 11. Professor W. A. Bone, F.R.S., "Gaseous Combustion at High Pressures."—May 31 and June 7. Sir W. M. Bayliss, F.R.S., "The Nature of Enzyme Action."—June 1. Professor H. A. Lorentz, Hon. F.R.S., "The Radiation of Light."—June 2 and 9. Mr. A. W. Hill, F.R.S., "The Vegetation of the Andes," and "The New Zealand Flora."

**A FORGED PRESCRIPTION.**—At Brighton Police Court, on March 22, Major John James Eckford, a retired officer, was charged with being in unauthorised possession of cocaine hydrochloride and morphine sulphate. It was stated for the prosecution that the defendant had been addicted to drugs for fifteen years, and while living in charge of trained male attendants found opportunities of



visiting the shop of Gwatkin & Son, chemists, where he produced what purported to be a prescription signed by Dr. Jowers, St. Leonards, which provided for quantities of morphine varying from 10 gr. to 15 gr. On the third visit a chemist was struck by a peculiarity in the writing, and it was eventually discovered that Dr. Jowers knew nothing of the accused. Addressing the Bench, Major Eckford said that he was not a drug maniac, but used to take drugs during the war and subsequently. "One could buy drugs by the pound then," he said. On the following day, the case was adjourned for arrangements to be made for him to enter a home.

## Irish News

### Brevities

Boards of Guardians in Northern Ireland are now inviting tenders for the supply of medicines and medical and surgical appliances for one year from April 1, 1923.

### Belfast

Mr. J. S. Waddell, 39 Victoria Street, has been appointed to represent Phillip Harris & Co., Ltd., Birmingham, from May 1. Mr. Waddell, who began his career with Mr. James Tate, Ph.C., Royal Avenue, Belfast, has acted successively as Irish representative for Burroughs Wellcome & Co., Park, Davis & Co., and F. Newbery & Sons, Ltd.

A settlement has been arrived at between the Belfast Corporation and pharmacists over the clauses in the former's Bill relating to the setting up of municipal pharmacies. Moving the second reading of the Bill in the Northern Parliament at Belfast on March 21, Sir Crawford McCullagh said the chemists' and other petitions were from ratepayers who objected to the trading proposals and who felt that the Corporation had no right to enter into schemes which could be carried out by private enterprise. They sought powers to purchase a chemical works for the manufacture of residuals, and he thought hon. members would realise that it would be for the benefit of the city to allow that to go through. With reference to the clause seeking powers to open chemist shops, the Corporation had made arrangements with the chemists in the city whereby certain medicines could be obtained day or night. The object of the Corporation in bringing in that clause was because there was so many chemists' shops in the city which were lock-up shops, and in cases of emergency there was difficulty in obtaining these medicines. The Bill was read a second time.

### Londonderry

Londonderry Port sanitary authority have granted permission to their medical officer of health to issue certificates for the supply of dangerous drugs, under the Dangerous Drugs Act, to foreign ships at the port in cases where he is satisfied that the drugs are required to complete the necessary equipment of the ships.

At Londonderry Assizes, recently, Mr. John F. O'Donnell, Ph.C., The Diamond, Londonderry, who was an applicant in the Court below against the Corporation for damages for the malicious breaking of a plate-glass window on March 26, 1922, appealed from a dismissal by the Recorder. It was pointed out that the occurrence was purely accidental, and his Lordship affirmed the ruling of the Recorder, with costs.

**IRISH MOSS INDUSTRY AT BREST.**—The preparation and exportation of Irish moss is carried on to a considerable extent in the Brest district, writes the United States Consul at Brest. It is gathered by the Brittany peasants along the rocky coast during the summer neap tides. The moss is spread out to dry, then sold to dealers, who pack it in bales after a second cleansing and sorting according to quality. Prior to the war the moss was largely exported to Germany. In 1921 the establishment at Brest, probably the most extensive in France, with a capacity of 300 tons annually, exported to the United States a total of 220 bales, weighing 55,376 lb.

## Scottish News

### Brevities

Mr. J. McNiven, chemist and druggist, Alexandria, has been re-elected as President of the Vale of Leven Traders' Association.

Ernest Jackson & Co., Ltd., manufacturing chemists, Crediton, have appointed Mr. H. H. Heal, c/o Miss Roy, 46 Smith Street, Glasgow, as their representative in Scotland.

### Edinburgh

Edinburgh spring holiday is on April 16.

The spell of spring-like weather has given an early start to the photographic season.

Mr. G. Somerville, chemist and druggist, South Clerk Street, has been elected President of the Heriot Club.

At the spring graduation at Edinburgh University, on March 22, the degree of B.Sc. was conferred on Mr. T. T. Jardine, son of Mr. T. Jardine (T. & H. Smith, Ltd.).

Edinburgh Chemists' Golf Club recently held its first outing of this season over Baberton Golf Course, with the following results: (1) Mr. R. D. Douglas, 76; (2) Mr. A. F. Rosie, 78; (3) Mr. J. Adam, 79.

Writing on "Drug Restriction" in the "Edinburgh Evening Dispatch" on March 26, Mr. D. B. Dott, after referring to Professor W. E. Dixon's remarks on the drug habit (see *C. & D.*, March 24, p. 408), says:—

"No one would object to an intelligent extension of restrictions, should these be shown to be required. Since the war, however, a craze has developed for more and more restrictions, and we have become involved in a maze of licences, permits, special registers, and factory and store regulations. That is the effect of the Dangerous Drugs Act, which, among other unwise provisions, vests far too much arbitrary power in the Home Secretary. . . . Notwithstanding the irksome and irritating restrictions to which we are exposed, our Act also 'has signally failed in its purpose.' And now, what is the remedy proposed? A new Act, authorising more restrictions, and penalties out of all proportion to the offence. . . . Trade is hampered by superfluous regulations, and public money is being wasted on a futile system of inspection, imperial and local, because of the misguided energy of the Home Office."

## Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

### Wednesday, April 4

*Pharmaceutical Society of Great Britain*, 16 Bloomsbury Square, London, W.C., at 11 a.m. Council meeting.

*Society of Public Analysts*, Burlington House, Piccadilly, London, W., at 8 p.m. Meeting.

**NORTH LONDON PHARMACEUTICAL ASSOCIATION.**—The annual dinner will be held on April 12 at the Connaught Rooms, Great Queen Street, W.C. It will be followed by a carnival dance from 10 p.m. to 1 a.m. Reception at 6. Dinner at 6.30 p.m. Tickets (12s. 6d. each) from the secretary (Mr. Herbert Skinner) not later than April 7.

"ANKLE CORSETS" are recommended in a recent issue of the "Daily Express" as of service to ladies whose ankles have become weakened owing to the deficiencies of ultra-smart shoes: they are described as being made of "a stiff black material," laced tightly on the upper part of the foot.

**VANILLA CROP PROSPECTS.**—The total crop of vanilla in Guadeloupe in 1922 amounted to 20,000 lb., and the estimate for the crop of 1923 is 27,000 lb. With the exception of 7,000 lb. sold to a French buyer, the entire crop has been purchased by an American firm. Mexico reports favourable conditions for the vanilla crop, which is expected to be of good quality. According to U.S. Government statements, the State of Vera Cruz has greatly increased its production of vanilla and should put on the market between 180,000 and 200,000 lb., while another report gives a fair estimate for 1922-23 crop as 175,000 lb.



## Legal Reports

**A Disputed Liability.**—In the Mayor's and City of London Court, on March 15, a claim was made by Trufood, Ltd., Lever House, Blackfriars, E.C., against William Desmond Noble, 2 Well Street, E., described as a chemist, for £14 9s. for goods supplied in the way of trade. The defendant, in his defence, said he was until lately manager for the debenture holders of Noble's Drug Stores, Ltd., and he intended to defend the action. The goods in question were bought on behalf of Noble's Drug Stores, Ltd., which was in compulsory liquidation, and that was well known to the plaintiffs. A witness from the liquidator, called for the plaintiffs, said the company went into liquidation in 1921, and the order in question was placed in 1922 by the defendant personally. The defendant had no authority from the liquidator to incur the debt. Judgment was given for the plaintiffs, in the absence of the defendant, for the sum sued for, with costs.

**"An Honest Mistake."**—In Perth Sheriff Court, on March 23, Mr. Walter Davidson, chemist and druggist, Blairgowrie, was charged with having supplied 1½ oz. of tincture of opium to Mr. Douglas, a local farmer, such drug not being supplied in pursuance of a prescription given by a duly qualified medical practitioner, registered dentist, or registered veterinary surgeon, and Mr. Douglas not being licensed or otherwise authorised to be in possession of such a drug (*C. & D.*, March 24, p. 394). For Mr. Davidson, Mr. Logan, solicitor, said that for a considerable number of years farmers had been using that poison for stock, and were skilled in its use. Mr. Davidson knew that an exception had been made in the Act in the case of farmers, but he did not know they needed permits. The interim sheriff said that, though the supplying of the drug had had an unfortunate result, it had not been contributed to by accused's neglect of the Order. It was an honest mistake. At the same time it was a case for a penalty, and a fine of £5 would meet the requirements of the case.

**Delayed Delivery.**—In the Mayor's and City of London Court, on March 22, Mr. Kali N. Memon, trading as Memon, Son & Co., chemical merchants, 33 Gt. Tower Street, E.C., sued the British Danubian Trading Corporation, Ltd., 346 Strand, for £12 11s., for 24 casks of ammonia chrome alum, medium crystals, 13 per cent. Mr. Guedella appeared for the plaintiff and Mr. Fuller for the defendants. Mr. Guedella said that the amount of the original account was £120. There was a counter-claim for damages for breach of contract in the delayed delivery of 5 tons of the goods. The counter-claim also alleged a defect in the quality, which was not now persisted in. Mr. Fuller said it would have necessitated a commission being sent to Vienna, and the amount did not warrant it. Mr. Guedella said he would have thought that £2 would have obtained all the chemical talent in Vienna. The question was whether delivery was made within due time under the contract. On September 21 there was an order for delivery of 10 tons of the alum; then there was a request to re-mark the goods, and delays occurred for which the plaintiff was not responsible. Mr. Dawson, in the employ of the British Alizarine Co., Ltd., who manufactured the alum, spoke to the deliveries. Mr. Leonard Pearce, chemical merchant, High Holborn, and other witnesses gave evidence for the defence, chiefly as to market fluctuations during the period in question. The judge thought there had been a waiver of the strict terms of the contract. Judgment was given for the plaintiff on the claim for £12 11s., and for the defendants for £5 on the counter-claim, each with costs.

**A Threefold Claim.**—In the King's Bench Division of the High Court, on March 23, an action was brought by Parke's Drug Stores, Ltd., Harwood Street, N.W., Islington, against W. F. Edwards & Son, Ltd., flour, corn and seed merchants, Swan Yard, Islington, N., claiming possession of certain premises at Islington, mesne profits, and damages for alleged breach of covenant to repair the premises. It was stated that the plaintiffs had granted the defendants a lease of certain premises from April 28, 1920, for seven years, at a rent of £120 per annum. It appeared that a part of the premises collapsed in May

1922, and the substantial issue was whether or not the premises collapsed by reason of defendants' non-repair under covenant of the lease. There was also a dispute as to whether the defendants gave up possession or not. The defendants took up the position that the landlord was bound to rebuild when the building collapsed, and the plaintiffs replied that the premises were out of repair, and they served upon defendants a notice under Section 14 of the Conveyancing Act calling upon them to repair or make reasonable compensation. The age of the building was from sixty to eighty years old, and the plaintiffs said that the building collapsed because it had been overloaded. This the defendants denied. Mr. Justice Sankey held that the defendants were wrong in asking him to decide that they had given up possession of the premises, and on that point found in favour of the plaintiffs. He came to the conclusion that the building had not been improperly loaded, but its collapse was due to faulty construction and the use of faulty materials, and held that defendants were not liable to comply with the notice under the Conveyancing Act. Judgment was given for the defendants, with costs.

**Fine for Inaccurate Dispensing.**—At North London Police Court, on March 23, Mr. Wilfred Bernstein, chemist and druggist, 128 Ball's Pond Road, N., was summoned for having sold a certain compound which was not composed of the ingredients in accordance with the demands of the purchaser, inasmuch as the said compound contained potassium bromide to the extent of 20.3 per cent. in excess of the amount prescribed, and spiritus ammoniæ aromaticus to the extent of 28.6 per cent. in excess. Mr. Kirby, defending, entered a plea of "Guilty." Mr. Bramall, prosecuting, remarked that he was not in a position to say that the purchaser would be injured by the excess, but pointed out that doctors frequently gave prescriptions in order to note results on which future treatment would depend. An excess or a deficiency in any ingredient might mislead a medical man. Mr. Kirby said that the prescription was made up by an assistant, who had since been discharged. The defendant himself checked the nux vomica in the prescription, and the analysis showed this to be correct, but he did not check the weight of the harmless drugs. The Magistrate: I have noticed notes on labels, "dispensed by," and "checked by." From what has been said, I gather that one person does the work, and another looks on to see that he does it. That is the reason why we pay 1s. 8d. for sixpennyworth of materials. (Laughter.) Continuing, the magistrate said that in some quarters a very serious view had been taken of inaccurate dispensing. In this case the excess was in harmless drugs, but it might have been different. No one wished to be unreasonable, but accurate dispensing was a matter of the greatest public importance. He fined the defendant £4, with £2 2s. costs.

**Copper in Tinned Peas.**—At Bow Street Police Court, London, on March 20, William Benjamin Shearn, caterer and fruiterer, Tottenham Court Road, W., was summoned under the Sale of Food and Drugs Acts, 1875 to 1907, for selling at a branch shop an article of food—to wit, tinned peas—which was mixed with a certain ingredient—i.e., 0.11 per cent. of copper, equivalent to 3.038 gr. per lb. of crystallised copper sulphate, so as to render the said article a food injurious to health. Mr. Harry Hawkes, prosecuting, said that in 1909 this question of the use of copper sulphate was considered by a Departmental Committee. The report of the majority of the Committee was adverse to such use altogether, but the report of the minority recommended that the use might be permitted to the extent of not more than 2gr. per lb. No action was taken on the reports, but in some other countries the use of copper sulphate for preserving or colouring purposes had been prohibited. Mr. Harry Richard Kenwood, C.M.G., M.B., F.C.S., professor of hygiene in the University of London, and medical officer of health for Stoke Newington, giving evidence, said that he had made a study of the effects of copper on the human system. The tinned peas referred to were coloured by means of a solution of copper sulphate. The effect of eating peas coppered to the extent that these were would be, in the case of many individuals, to upset the consumer by seriously interfering with digestion. Copper was a



metal which had a distinctly poisonous action upon the human system, and although the effect here would not be any acute symptoms of poisoning, digestion would be checked through the paralyzing or partial stopping of the action of the digestive ferments, and general malaise would be set up, which would ordinarily pass off in about twenty-four hours. Part of the copper was stored in the liver, and that which entered the blood was eliminated largely through the kidneys with very irritating effect upon them. Copper was now rarely used in medicine, because of the general opinion of medical men that it was not tolerated well. People who suffered from the presence of copper in their food did not attribute the trouble to that cause, but put it down to some temporary disturbance, and ordinarily did not consult a doctor. If they did consult one he treated the symptoms, the patient, as a rule, got well very quickly, and nothing more was heard of it. The witness proceeded to give the history of two cases which he had investigated, in which he had been able to trace illness directly to the eating of coppered peas. It was not necessary to use copper to preserve peas, but, no doubt, it made them look much fresher and more appetising, and that might induce people to eat them in larger quantities than they would otherwise do. The copper was really used not for preservative but for colouring purposes. Its presence in the quantity proved in this case was certainly dangerous. The witness added that he believed people had a prejudice against the use of coppered peas, and he thought very few would eat them knowingly. He was satisfied that the presence of copper even in a much smaller quantity than was the case here would be injurious to health, not necessarily in the case of every individual consumer, but in the case of most. In reply to the magistrate, Professor Kenwood said it had been established that the copper sulphate became pretty equally distributed among the peas; they all contained about the same amount. In cross-examination, the witness said, in regard to the two cases of which he had given the history, that two out of five persons who had consumed the peas in the first case were upset, and one out of three in the second case. Does not that seem to show that copper sulphate was not the only cause of the injury in those cases?—No, it only shows that some of the consumers were more susceptible than the others. If, as you say, the copper sulphate makes the peas look more appetising, is it not a fact that food that has an appetising appearance is apt to be more digestible?—It is eaten with greater relish, so that from that standpoint it may digest a little better than otherwise. The Magistrate: Would that apply to drinks also? (Laughter.) Replying to further questions, the witness explained that if coppered peas were eaten frequently the effect would be cumulative. Dr. Cecil W. Hutt, medical officer of health for Holborn, said he concurred in the opinions expressed by Professor Kenwood. The defendant, giving evidence on his own behalf, said that each of the tins in question bore a statement that it contained a small quantity only of copper sulphate. He relied on that statement. More recently he had bought some other foreign peas. There was no disclosure on the tins as to any foreign ingredients, so he had them analysed to see if they contained any copper. He produced the analyst's certificate showing that they contained no copper nor anything injurious. He had a vegetarian restaurant, and advertised himself as selling health foods. He never advocated the consumption of tinned vegetables. Mr. Reginald Beck, the defendant's solicitor, submitted that under the provisions of the Acts his client was absolved from any penalty in such a case as this, where he had no knowledge that the article was adulterated to an extent injurious to health. He was a man who held strong views on the question of purity of food, and would not wilfully or willingly sell anything harmful to his customers. The magistrate said he was satisfied that the amount of copper sulphate in these peas was such as to be injurious to health, and the defendant had not taken any steps to have them analysed. He must, therefore, order the defendant to pay a fine of £21, with £10 10s. costs.

A GIFT of 800,000 marks has been made, by an English "colloidal chemist," to the recently founded Colloid Society in Leipzig.

## New Companies and Company News

**P.C. means Private Company and R.O. Registered Office**

**EDGAR PHILLIPS (CHEMISTS), LTD. (P.C.).**—Capital £1,000. Objects: To take over the business of a drug store proprietor carried on by E. Phillips at the Priory Pharmacy, 2 Yew Lane, Ecclesfield. The permanent directors are: E. and Mrs. W. M. Phillips, 62 Greystones Road, Sheffield, and G. H. Chaston, Priory Pharmacy, Ecclesfield. R.O.: 2 Yew Lane, Ecclesfield.

**EASIT (MANCHESTER), LTD. (P.C.).**—Capital £1,000. Objects: To adopt an agreement with R. Hampshire and A. R. Sykes for the acquisition of the business of manufacturing chemists carried on as the "Easit" Manufacturing Co. The first directors are: R. Hampshire, A. R. Sykes, H. P. Clayton, and N. Bournes. R.O.: 9 Lower Chatham Street, Chorlton-on-Medlock, Manchester.

**FULGO PRESERVATIVE, LTD. (P.C.).**—Capital, £1,000. Objects: To acquire a process for the manufacture of a liquid preservative for use upon foodstuffs; to adopt an agreement with S. J. Williams and H. A. Green, and to carry on the business of manufacturers of and dealers in preservatives of all kinds food, chemicals, drugs, etc. The first directors are: F. W. Forge, S. J. Williams, H. A. Green, H. C. J. Fullwood, and D. G. Gillard. R.O.: Sardinia House, Kingsway, London, W.C.

**BURCHELLS (CHEMISTS), LTD.**—At a meeting held at Wolverhampton recently it was resolved that this company be wound up voluntarily. Mr. A. O. Haskins, 14 Princess Street, Wolverhampton, was appointed liquidator.

**UNITED ALKALI CO., LTD.**—The directors recommend a dividend of 2s. per share on the ordinary shares, carrying forward £375,000. They further propose to capitalise £300,000 of the undivided profits, and to issue to the shareholders one fully-paid ordinary share for every two shares held.

**UNITED GLASS BOTTLE MANUFACTURERS, LTD.**—The report for 1922 shows a profit, after providing for depreciation, income tax and debenture interest, of £37,867, subject to corporation tax, compared with a loss of £139,713 for 1921. Including the credit balance of £29,077 brought forward, after utilising the reserves to wipe out deficit at December 31, 1921, the balance available is £66,944, from which the directors have applied to additional stock reserve £12,500, leaving £54,444, which they recommend be carried forward. The directors in their report state that the condition of the bottle trade continues to be adversely affected by the trade conditions of the world generally, and after full consideration they have decided it would be a prudent policy to conserve the resources of the company.

**APOLLINARIS AND JOHANNIS.**—A series of meetings of the debenture stockholders, the deferred interest certificate holders and ordinary shareholders was held on March 26 at the Holborn Restaurant, W.C., to consider a scheme of arrangement and reduction of capital in which it was proposed that the debenture-holders should write down their stock by 20 per cent., the rate of interest being raised from 4 to 5 per cent. and the rate of redemption from £100 to £120; that the interest on the certificates should be reduced from 6 per cent. to 5 per cent., that sinking funds for both debenture stock and deferred interest certificates should be constituted, that the preference shareholders should be called upon to forgo arrears of cumulative dividend, and that the preference shares should be written down from £10 to six £1 ordinary shares, and the ordinary shares should be written down from £10 to two £1 ordinary shares. Considerable discussion ensued at the various meetings, and at the meeting of the certificate holders the scheme was modified to the extent that the annual interest should remain a charge upon the general assets of the company, instead of being payable from the yearly profits as proposed. With this modification the series of resolutions necessary was adopted.



## March Drug Tariff

The following are the chief alterations for March in the Insurance Drug Tariff for England and Wales:—

*Lower.*—Acid, citric, pulv. B.P., 2s. 10d. lb.; acid, hydrobrom. dil. B.P., 1s. lb.; alum, purif. pulv. B.P., 1s. 5d. lb.; ammon. brom. B.P., 1s. 8d. lb.; argent. nit. B.P., 3s. 2d. oz.; argent. nit. indur. B.P., 3s. 6d. oz.; argent. nit. mitigat. B.P., 3s. oz.; camphora B.P. (flowers), 6s. 3d. lb.; chlorodynum B.P.C., 5s. 6d. lb.; collod. salicylic. B.P.C., 6½d. oz.; conf. sennæ B.P., 2s. 3d. lb.; emuls. chloroform. B.P.C., 1s. 8d. lb.; ext. cannab. ind. B.P., 19s. oz.; ext. ergotæ B.P., 3s. 6d. oz.; ext. ergot. liq. B.P., 7s. 6d. lb.; ext. filic. liq. B.P., 1s. 1d. oz.; ext. hydrast. liq. B.P., 3s. 9d. oz.; ferri sulph. pur. B.P., 6d. lb.; glycer. acid, tannic. B.P., 3s. 2d. lb.; guaiacoli carbonas B.P., 1s. 2d. oz.; lin. aconit. meth., 3s. lb.; lin. calcis B.P., 1s. 6d. lb.; lin. methyl. sal. co. B.P.C., 9s. lb.; lin. pot. iod. c. sap. B.P., 4s. lb.; liq. adrenal. hydrochl. B.P., 2s. 6d. oz.; liq. strych. hydrochl. B.P., 3s. 9d. lb.; menthol B.P., 4s. oz.; ol. tereb. rectif. B.P., 3s. 2d. lb.; paraff. mol. alb. B.P., 1s. 7d. lb.; paraff. mol. flav. B.P., 9d. lb.; pot. brom. B.P., 1s. 4d. lb.; pulv. lobeliæ co. B.P.C., 3s. lb.; pulv. scammon. co. B.P., 7s. 6d. lb.; pulv. stramon. co. B.P.C., 3s. lb.; pulv. tragac. co. B.P., 4s. 2d. lb.; quin. salicyl. B.P.C., 5s. oz.; resorcinum B.P., 11d. oz.; saccharum lact. pulv. B.P., 1s. 8d. lb.; sapo mollis B.P., 1s. 9d. lb.; sodii brom. B.P., 1s. 5d. lb.; sodii et pot. tart. B.P., 1s. 4d. lb.; strych. hydrochlor. B.P., 6s. 9d. oz.; sulphur. præcip. B.P., 1s. 4d. lb.; theobrom. et sod. salicyl. B.P., 1s. 4d. oz.; thymol B.P., 2s. 3d. oz.; tr. cannab. ind. B.P., 26s. lb.; tr. ergotæ ammon. B.P., 7s. 3d. lb.; tr. hydrastis B.P., 9s. 6d. lb.; tragacanth. pulv. B.P., 18s. lb.; ung. ac. salicyl. B.P., 2s. lb.; ung. hamamel. B.P., 2s. 8d. lb.; ung. hyd. oleat. B.P., 3s. 8d. lb.; ung. ichthamol B.P.C., 2s. 9d. lb.; ung. metallorum B.P.C., 2s. 6d. lb.; vinum antimoniale B.P., 3s. lb.; zinci valerian. B.P., 1s. 9d. oz.

*Higher.*—Acid. carbolic. B.P. (detached crystals), 2s. 5d. lb.; acid. carbolic. liq. B.P., 2s. 2d. lb.; acid. salicylic. B.P., 3s. lb.; amyli pulv. (B.P.) maize, 5d. lb.; aq. carui ex conc., 13s. 6d. lb.; barbitonum B.P., 1s. 8d. oz.; butyl chloral hyd. B.P., 1s. 4d. oz.; dec. sarsæ jam. co., ex conc., 8s. lb.; hexamina B.P., 7d. oz.; inf. caryoph. ex conc., 3s. lb.; liq. formaldehyd. B.P., 1s. 9d. lb.; methyl salicylas B.P., 4s. lb.; podoph. res. B.P., 3s. oz.; saccharum purif. pulv. B.P., 10d. lb.; spt. menth. pip. B.P., 24s. lb.; syrupus B.P., 1s. lb.; syr. ferri iod. B.P., 2s. 6d. lb.; syr. ferri phosph. co. B.P.C., 1s. 4d. lb.; syr. pruni virg. B.P., 1s. 4d. lb.; syr. rheados B.P., 1s. 8d. lb.; syr. tolut. B.P., 1s. 5d. lb.; tr. aurantii B.P., 20s. lb.

**APPLIANCES.**—The following are the prices for the appliances in accordance with the new specifications:—

*Adhesive Plaster*, per sq. ft., 9.0d. *Bandages, Rolled*—Calico, bleached, B.P.C., 2 ins. by 4 yds. 2.6d. each; 2½ ins. by 4 yds., 3.2d. each; 3 ins. by 4 yds., 3.8d. each. Calico, unbleached, B.P.C., 2 ins. by 4 yds. 2.4d. each; 2½ ins. by 4 yds., 2.9d. each; 3 ins. by 4 yds., 3.4d. each. *Crepe*, B.P.C., 2 ins., 15.0d. each; 2½ ins., 17.8d. each; 3 ins., 20.5d. each. *Domette*, B.P.C.; 2½ ins. by 6 yds., 11.7d. each; 3 ins. by 6 yds., 14.2d. each. *Elastic Web*, 2½ ins. by 1 yd., 8.0d. each; 3 ins. by 1 yd., 10.0d. each. *Flannel*, B.P.C. (Pale Blue), 2½ ins. by 4 yds., 12.5d. each; 3 ins. by 6 yds., 20.2d. each. *India-rubber*, 2½ ins. by 1 yd., 18.0d. each; 2½ ins. by 2½ yds., 27.0d. each. *Muslin*, B.P.C., 2½ ins. by 6 yds., 2.8d. each; 3 ins. by 6 yds., 3.1d. each; 4 ins. by 6 yds., 4.1d. each. *Open Wove*, Grey, B.P.C., 1 in. by 3 yds., 0.8d. each; 1½ ins. by 4 yds., 1.3d. each; 2 ins. by 4 yds., 1.6d. each; 2½ ins. by 4 yds., 2.0d. each; 3 ins. by 4 yds., 2.4d. each; 4 ins. by 6 yds., 4.4d. each; 6 ins. by 6 yds., 6.5d. each. *Open Wove*, White, B.P.C., 1 in. by 3 yds., 0.8d. each; 1½ ins. by 4 yds., 1.4d. each; 2 ins. by 4 yds., 1.8d. each; 2½ ins. by 4 yds., 2.2d. each; 3 ins. by 4 yds., 2.6d. each; 4 ins. by 6 yds., 4.9d. each; 6 ins. by 6 yds., 7.2d. each. *Plaster of Paris*, B.P.C., 3 ins. by 5 yds., 23.0d. each; 4 ins. by 5 yds., 28.5d. each. *Catheters*—Gum-elastic (best brown) single web, 1-12, 8.0d. each. *Soft rubber*, 1-12, 9.0d. each; over 12, 16.0d. each. *Cotton Wools, Absorbent*—Boric, B.P.C., 1 oz., 2.0d. each; 2 ozs., 3.5d. each; 4 ozs., 6.3d. each. *Sal-alembroth*, B.P.C., 1 oz., 2.3d. each; 2 ozs., 3.8d. each; 4 ozs., 7.3d. each. *Unmedicated*, B.P.C., 1 oz., 1.7d. each; 2 ozs., 2.9d. each; 4 ozs., 5.3d. each; 8 ozs., 10.0d. each; 1 lb., 17.5d. each. *Gauzes*—Boric, B.P.C., ¼ of 1 sq. yd., 1.1d. each; ½ of 1 sq. yd., 1.7d. each. *Carbolic*, B.P.C., ¼ of 1 sq. yd., 1.1d. each; ½ of 1 sq. yd., 1.7d. each. *Double Cyanide*, B.P.C., ¼ of 1 sq. yd., 1.2d. each; ½ of 1 sq. yd., 1.8d. each. *Iodoform*, B.P.C., ¼ of 1 sq. yd., 1.3d. each; ½ of 1 sq. yd., 2.2d. each. *Picric*, B.P.C., ¼ of 1 sq. yd., 1.3d. each; ½ of 1 sq. yd., 2.2d. each. *Sal-alembroth*, P.B.C., ¼ of 1 sq. yd., 1.1d. each; ½ of 1 sq. yd., 1.7d. each. *Sublimate*, B.P.C., ¼ of 1 sq. yd.,

1.1d. each; ½ of 1 sq. yd., 1.7d. each. *Unmedicated*, B.P.C., ¼ of 1 sq. yd., 1.0d. each; ½ of 1 sq. yd., 1.6d. each; 1 sq. yd., 2.8d. each; 3 sq. yds., 7.5d. each. *Gauze and Cotton Tissue*, B.P.C., 1 oz., 2.0d. each; 2 ozs., 3.8d. each; 4 ozs., 6.8d. each; 8 ozs., 12.5d. each; 1 lb., 23.0d. each. *Ice Bags*—Rubber, helmet shape, 126.0d. each. *Check*, circular shape, 8 ins. diam., 24.0d. each. *Lints*—Boric, B.P.C., 1 oz., 2.1d. each; 2 ozs., 3.8d. each; 4 ozs., 7.3d. each; 8 ozs., 13.5d. each; 1 lb., 25.0d. each. *Sal-alembroth*, B.P.C., 1 oz., 3.3d. each; 2 ozs., 5.9d. each; 4 ozs., 11.3d. each. *Unmedicated*, B.P.C., 1 oz., 2.6d. each; 2 ozs., 4.8d. each; 4 ozs., 9.3d. each; 8 ozs., 17.3d. each; 1 lb., 32.0d. each. *Protectives*—Gutta Percha Tissue, B.P.C., per sq. ft., 4.5d. each. *Jaconet*, B.P.C., per sq. ft., 3.8d. each. *Oiled Cambric*, B.P.C., per sq. ft., 4.0d. each. *Oiled Paper*, 20 ins. by 30 ins., 1.5d. each. *Oiled Silk*, B.P.C., per sq. ft., 6.5d. each. *Splints*—Plain Arm Splints, 6.0d. each. Any other form of splint may be ordered by an Insurance Practitioner. *Standard Dressings*—No. 1, 2.8d. each. *Double cyanide gauze*, B.P.C., 36 ins. by 12 ins.; Absorbent cotton wool, B.P.C., 180 grains; Grey open wove bandage, B.P.C., 1 in. by 3 yds. No. 2, 4.0d. each. Boric lint, B.P.C., 9 ins. by 8 ins.; Absorbent cotton wool, B.P.C., 180 grains; Oiled paper, 6 ins. by 6 ins.; Grey open wove bandage, B.P.C., 2 ins. by 4 yds. *Suspensory Bandages*—Cotton, 12.5d. each. *Tous*—Carbolised, B.P.C., 8 ozs., 6.0d. each; 1 lb., 11.0d. each. *Unmedicated*, B.P.C., 8 ozs., 5.0d. each; 1 lb., 9.0d. each.

## New Books

Austen-Leigh, E. C.—*A List of English Clubs in All Parts of the World for 1923*. 4½ in. by 6½ in. Pp. 189. 7s. 6d. Spottiswoode, Ballantyne & Co. Ltd., New Street Square, London, E.C.4. [Contains a list of 3,950 clubs used by English-speaking people in many parts of the world. It gives in tabular form particulars of every club included, such as name of secretary, address, entrance fee, subscription, date of establishment, and objects for which founded. There are 1,760 golf clubs, to which special attention has been given; the issue also includes 230 ladies' golf clubs. A new feature this year is a page of contents that gives an alphabetical reference to the countries and colonies in which the clubs are situated.]

Arends, G., and Holfert, J.—*Volkstümliche Namen der Arzneimittel, Drogen und Chemikalien*. 7½ in. by 5½ in. Pp. 283. Verlag von Julius Springer, Berlin. [A dictionary of the popular appellations in use in different parts of Germany for drugs, chemicals and remedies. Against each German term the corresponding Latin designation is indicated, and the wealth of names in current use may be gauged from the fact that this work contains about 18,000 terms. Although primarily intended for use by pharmacists in German-speaking countries, the book contains many appellations of interest to the philologist; the variations which Latin names have undergone, variations which differ widely as a result of the influence of local dialects, offer a fund of amusement, while many terms bear witness to the influence of popular superstition, as is evidenced by the numerous articles associated with his Satanic majesty—an association which is difficult to trace in the case of peppermint lozenges, known locally as "little devils" (Teufelchen).]

Robertson, W. G. Aitchison.—*Aids to Forensic Medicine and Toxicology*. Ninth edition. 6½ in. by 4 in. Pp. 155. 3s. 6d. Baillière, Tindall & Cox, 8 Henrietta Street, Covent Garden, London, W.C. [One of the "Aid" series for students, the first eighty pages dealing with forensic medicine and the rest of the book with toxicology. The sale of poisons and scheduled poisons is dealt with very inadequately. The following opinion given in the chapter referred to is in our opinion calculated to make medical students careless in prescribing: "The practitioner who carelessly prescribes a drug in a poisonous dose is not held responsible, but the dispenser would be if he dispensed it and harmful or fatal consequences followed on its being swallowed. When a dispenser finds an error in a prescription it is his duty to communicate with the prescriber privately, pointing out the mistake." Chemists and druggists are designated "druggists," and the author refers to the Proprietary Medicines Bill introduced in 1920 as "likely soon to become law."]

**EUCALYPTUS OIL AS MOTOR FUEL.**—According to Captain C. M. Dyer, Australia, eucalyptus oil can be used in petrol engines with efficient means of vaporisation.



## Trade with the Irish Free State

### NEW IMPORT DUTIES

THE decision of the Irish Free State to introduce an autonomous tariff, imposing an *ad valorem* duty of 33½ per cent. on certain classes of goods, means that, commencing on April 1, trade with the Free State, whether by sea or by land, will be subject to the Customs laws and regulations as in the case of traffic with any foreign country. The following is a list of the principal dutiable articles under the new regulations: Tobacco, cigars, cigarettes, spirits, liqueurs, perfumery, beer, coffee, chicory, tea, dried fruit, cocoa, chocolate, sugar and confectionery, molasses and glucose, saccharin, wine, playing cards, musical instruments (including gramophones), cinematograph films, clocks and watches, gramophone records, wireless, vacuum tubes, metallic tungsten, compounds of thorium, synthetic organic chemicals, optical instruments, optical glass, scientific glassware, scientific instruments, gauges, arc lamp carbons, hosiery, matches, table waters and cider, motor-cars and accessories, motor-cycles, parts and accessories, analytical reagents and other fine chemicals, laboratory porcelain, and ignition magnetos. The principal articles the importation of which is prohibited or restricted are: Extracts of tea, coffee, chicory and tobacco, foreign reprints of registered copyright works, including music, dogs (unless covered by a licence issued by the Ministry of Agriculture), arms, ammunition and explosives (unless covered by licence), prepared opium, cocaine, morphine, diamorphine (heroin), and raw and medicinal opium (except under licence). The baggage of passengers arriving from Great Britain and Northern Ireland will be subject to the regulations applicable to luggage from foreign ports, and merchandise may not be imported in personal effects.

### DUTIABLE GOODS

THE Commissioners of Customs and Excise in London have issued a notice in regard to dutiable goods from and to the Irish Free State, in the course of which they notify that in order to facilitate the passage into Great Britain and Northern Ireland of dutiable goods exported thereto under bond from the importing ship's side in the Free State, or from a bonded warehouse in the Free State, or on drawback from the Free State, the Commissioners of Customs and Excise will, for the present and until further notice, subject such goods to a modified examination on importation, provided that there is annexed to the relative import entry, either prime or warehousing, a certificate from the Customs and Excise officers of the Free State giving full particulars of each package as ascertained by them at the time of landing ex ship, removal from warehouse, or examination for drawback, as the case may be. It should be specially noted that this arrangement does not apply to duty-paid goods cleared from revenue charge in the Free State and afterwards imported into Great Britain and Northern Ireland. Traders desiring to take advantage of the concession should take steps to procure the necessary certificate from the Customs and Excise officials in the Free State at the time examination is made for drawback or of delivery ex ship or ex warehouse of dutiable goods destined for immediate exportation to Great Britain or Northern Ireland. They must also arrange that the certificate shall reach their agent, who is to pass the import entry for the goods in Great Britain or Northern Ireland at least as soon as the goods themselves reach the Custom Station there. Corresponding certificates will be issued by Customs and Excise officials in Great Britain and Northern Ireland on request from exporters of dutiable goods to the Free State. Reciprocal arrangements have been made by the Revenue Commissioners in Dublin.

### RAILWAY NOTICES

The Railway Companies announce that on and from April 1 next the British Customs and the Irish Free State Customs will require on prescribed forms a detailed declaration of contents, value, quantity, origin and final destination of all traffic, whether liable to

Customs duty or not. Such declarations will also be required for traffic sent to a destination in Northern Ireland passing through a Free State port, or to a destination in the Free State passing through a Northern Ireland port. A small charge will be made to cover Customs clearing services. Dutiable and drawback goods must be labelled thus: "Must not be shipped without production to the Customs." No traffic will be accepted for transit unless accompanied by the requisite forms. Information as to declaration, etc., forms can be obtained on application at stations and shipping offices. The railway or shipping companies accept no responsibility for any expense or loss owing to failure to comply with the Customs regulations.

## Ulster Retail Drug Trade Association

THE annual meeting of the Ulster Retail Drug Trade Association was held in the Chemists' and Druggists' Rooms, Waring Street, Belfast, on March 21, at which there was a large attendance. The President (Mr. W. E. Wilson) welcomed members from Londonderry, Ballymena, Lurgan, and other centres. The annual report, presented by the Committee, reviewed the work done during the year. Members of the trade, it was pointed out, do not require a licence to enable them to stock and sell such substances as sulphur, saltpetre and chlorate of potash, etc. All sales of such substances as form ingredients in making explosives must, however, be registered. Other matters dealt with included the question of discount allowance on sale tickets at the counter or to Societies and Guilds, the non-coding of prescriptions and the Belfast Corporation Bill in which the offending clauses, in regard to the opening of chemists' shops by the Corporation, have been recommended for withdrawal. Mr. John Gray, R.D., was co-opted, instead of Mr. Wm. Martin, resigned, and Mr. R. I. Edwards in place of Mr. John Montgomery.

The President moved the adoption of the report, and Mr. J. Hewton seconded. Mr. W. J. Rankin (treasurer) presented the financial statement, the adoption of which was moved by Mr. R. W. McKnight, seconded by Mr. S. Dale and supported by Mr. James Tate. Mr. W. E. Wilson proposed Mr. Andrew Wilson, Albert Bridge Road, senior Vice-President, as *President*, and eulogised his work for the trade. This was agreed unanimously. The other officers were elected as follows: *Vice-Presidents*: Mr. Joseph Moffet, R.D., Mr. J. C. Culbert, M.P.S.I. *Committee*: Messrs. H. Crail, J. A. Bingham, Wm. Macartney, R. Kells, C. Abernethy, A. W. Mann, M. McDonald, D. Henderson, E. J. Roberts, J. Macauley, H. F. Moore, R. I. Edwards, John Gray, J. McDowell, W. T. Gordon, J. P. Bowden, George Johnston, and John Adams. *Wholesale Section*: Messrs. F. Moore (Thomas McMullan & Co.), S. Haydock (J. & J. Haslett, Ltd.), A. W. Gamble (Shaw & Jamison, Ltd.), Fred Storey (Fred Storey, Ltd.). *Hon. Auditors*: Mr. McKnight and Mr. Martin. *Hon. Secretaries*: Mr. James Dundee and Mr. S. Suffern. *Treasurer*: Mr. W. J. Rankin. *Chamber of Trade*: Messrs. S. Suffern, W. J. Hardy, A. Wilson, W. E. Wilson, and J. C. Culbert. *Ministry of Labour*: Messrs. W. J. Hardy, James Tate, S. Suffern, and H. G. Pring. Mr. Culbert proposed a vote of thanks to the outgoing President (Mr. W. E. Wilson) for his valuable services in the chair during his term of office, which was seconded by Mr. S. Gibson and supported by Mr. H. Lancashire, and conveyed by Mr. Tate. Mr. Wilson suitably replied, and proposed that the best thanks of the Association be given to their esteemed secretary (Mr. W. J. Stevenson) for the very capable and efficient manner in which he discharges his duties. This was seconded by Mr. Bingham, and supported by Mr. Dobbin in a very complimentary speech, to which Mr. Stevenson replied. Subsequently, Mr. Rankin moved that the Board of Management be thanked for their work during the past year, which was seconded by Mr. Guiler and passed by acclamation.



# Practical Wireless Telephony

## XVI. Frame Aerials and Direction Finders

WHILE due importance must in general be given to the efficiency of the aerial and earth wires, and in particular this applies most forcibly to the users of crystal sets, the enormously increased efficiency of the multi-valve set, together with the manipulative skill in tuning acquired by experience and constant practice, often enables the operator to actuate his receiving set without any aerial, and sometimes with only an apology for an earth. Still, some sort of an aerial, even a portable frame, is best used. This appliance is found to be markedly directional in its operation, and it should always be set up on a base allowing rotation through at least 90° or the fourth part of a circle, when it will soon display minimum and maximum positions, which should be at right angles to each other. The construction of such an aerial was described in the *C. & D.*, February 3, p. 176. Though the strength of the signals received in this manner will rarely exceed 30 per cent. of those obtained with an open aerial, the disadvantage is balanced to a large extent by the comparative freedom from jamming. The best position of the frame for reception is when the plane of the frame is in the path of the incoming waves. The reason for this is that there is a difference of phase produced in the opposite sides of the frame owing to their difference in distance, although perhaps only two feet, from the transmitting station. It will be appreciated that the waves cut one side of the frame before they reach the other, and this cutting of the sides at different intervals of time produces in the windings high-frequency alternating currents, which are then rectified in the receiving set in a similar manner to those obtained on an outside aerial. When the frame faces the direction of the incoming waves these cut the sides of the frame at precisely the same time, and so the potential produced in them is equal and opposite, no alternating current being available for operating the receiver. Practical use of this selective property is employed in direction-finding apparatus, which generally consists either of one single flat vertical loop of wire or two frame aerials set at right angles to each other and provided with a search coil capable of rotation and carrying a pointer traversing a graduated scale, which, when maximum signals are received, points to or away from the source of the signals. Such an appliance, if carefully calibrated, will indicate the directional position of any operator sending out his legitimate signals or the careless amateur who, heedless of the annoyance he is causing, allows his aerial to oscillate and so act as a transmitting station. On quite a simple loop apparatus the line of direction can be found within a degree or so, and with the more refined instruments a very high degree of accuracy can be obtained. When two such instruments are employed at a definitely known distance, and compass bearings are taken with great precision, the point where the direction-finder lines cross can be defined with an error as small as a dozen yards at a range of ten miles or more.

With the above instalment the series of articles on wireless telephony is being concluded. These articles, which have been written specially for the *C. & D.* by a chemist who has for many years devoted himself to scientific pursuits, have been designed to present information of practical value in the course of business, and such as would only be found in text-books encumbered with so many details as to make the search for knowledge unduly tedious. It will be found that a brief account of most of the matters on which a customer is likely to seek advice is given, the articles covering wave motions, explaining the difference between damped and undamped waves and wave-length, followed by an outline of the electron theory, a short description of conductors and insulators, particulars regarding aerials, the action of crystal detectors, inductance, condensers, heterodyne reception, valves and their properties, the charging of accumulators, and details concerning the telephone and loud speakers. Since we first suggested that chemists should take up the sale of wireless apparatus (*C. & D.*, I., 1922, 864) many have done so

with advantage, no previously established line being affected. The prices asked for wireless sets and component parts are becoming more settled, but there is room for a reduction in some classes of apparatus. Trouble still prevails over the issue of wireless licences, of which it is announced that 80,000 have been issued, 50,000 of the broadcasting type and 30,000 to experimenters. The British Broadcasting Co., realising that a far greater number than the licence-holders are enjoying the concerts without paying fees or royalties, are now anxious for the issue of a third kind of licence for the person who assembles his own set. It should be remembered that besides sharing in the money received by the Post Office for licences, the British Broadcasting Co. must have received a very large sum of money in royalties on the wireless sets that have been sold. So far nothing has been made public regarding the finances of the concern, though a fair sum must also have been received from entrance fees of manufacturers alone. A point of interest is that great advances are being made in designs of circuits and apparatus, so that those at present used may become obsolete in the course of two or three years.

## Recent Patents

Abstracts of specifications of recently-granted patents for inventions. The complete specification (1s. each including postage) of British patents can be obtained from the Patent Office, 25 Southampton Buildings, London, W.C.2, on quoting the name of the patentee and the number of the patent.

**Aerial Photography.**—A camera for taking successive views at regular intervals of time, wherein the plates are mounted on a rotary carrier, permitting the front plate to be transferred to the rear after exposure. (H. D. Wootton. 193,448.)

**Hand-cleansing Preparation.**—A paste for removing dirt or grease from the hands, consisting of:—

Oleic acid	...	...	15 per cent.
Glycerin	...	...	5 "
Petroleum spirit	...	...	5 "
Ground silica	...	...	30 "
Potassium hydroxide	...	...	3 "
Water	...	...	42 "

(J. W. Amner and Mabel E. Harris. 193,526.)

**Solid Formaldehyde.**—A method of preparing formaldehyde in a solid form, consisting in heating under a reflux condenser at about 90° C. a solution of 600-700 grams of calcium lactate in a solution of formaldehyde (35 per cent.). The syrupy liquid thereby obtained solidifies on cooling to a hard, white crystalline mass, containing about 12 per cent. of formaldehyde, which can be set free by the addition of hot water. (Chemische Fabrik vormals E. Schering. 193,551.)

**Toothbrush.**—A toothbrush, the bristle-carrying part of which can be rotated and arrested at various angles to the handle. (A. Saxe. 193,601.)

**Hydrazobenzol.**—An apparatus for the preparation of hydrazobenzol and its homologues by the hydrogenation or reduction of nitrobenzol, or corresponding homologue, by zinc in granules and sodium hydroxide. (F. B. Dehn. 193,663.)

**Collapsible Tube Holder.**—A protective holder made of rubber, moulded and vulcanised, into which the collapsible tube is fitted and not removed until the contents are exhausted. (J. Delves. 193,723.)

### FRENCH PATENTS

**Sterilisation by Ultra-Violet Rays.**—An apparatus consisting of a mercury vapour lamp surrounded by a system of fine tubes of silica through which the liquid to be sterilised is made to circulate. (F. Ailhaud. B.F. 550,725.)

**Synthesis of Phenol.**—A continuous process for preparing phenol and its higher homologues by treating benzol, or its derivatives, with oxygen, or air, under high pressure in the presence of aluminium chloride, or other catalyst. (G. L. E. Patart. B.F. 550,344.)



# The Progress of Pharmacy

## AND ALLIED SCIENCES

### PHARMACY

**Mucilago Salep.**—With reference to the proposed alteration in the new edition of the Swedish pharmacopœia of the formula for preparing mucilage of salep by first rubbing down the powdered salep with sugar or milk sugar, J. H. Lorenzen ("Farmaceutisk Revy," No. 10, 1923) states that the following method yields a highly satisfactory preparation:—One gram of powdered salep is rubbed down with 1.5 grams of alcohol. Thereupon 9 grams of cold water, and, after mixing, 90 grams of boiling water are added and the whole brought to boiling over an open fire for one minute and then passed through a wide-meshed cloth.

**Curarine** possessing similar properties has been prepared from two specimens of curare of varied origin, according to L. Lewin ("Chemische Zeitung," 1923, 47, 65-66). The curare was dissolved in warm water and digested for long periods with freshly precipitated lead hydroxide, and the mixture dried at as low a temperature as possible. Extraction was next effected with absolute alcohol, and the residue, after removal of solvent, re-extracted with warm water. Traces of lead were removed with sulphuretted hydrogen, afterwards evaporating at a temperature not exceeding 50°. The varnish-like product was dissolved in cold alcohol, precipitated by ether, filtered, and dried. The yellowish or brownish powder is non-hygroscopic, and readily soluble in water. On subcutaneous injection, 0.05 mg. completely paralyzes a frog in ten minutes. It gives precipitates with the usual alkaloidal reagents, and a violet colour with a new reagent of titanium sulphate (0.1 gm.) in sulphuric acid (30 c.c.).

**Influence of Acid in the Extraction of Cinchona.**—Wilbur L. Scoville summarises the results of his investigations on the influence of hydrochloric acid in preparation of cinchona in the third of his series of papers from Parke, Davis & Co.'s laboratories on this subject ("Journal of the American Pharmaceutical Association," February 1923, p. 104). Extraction with hot weak acid gave disappointing results. The U.S.P. official menstruum (76 per cent. alcohol) is the best with the addition of 1.5 per cent. (absolute) hydrochloric acid for yellow bark and 2.5 per cent. to 3 per cent. for red cinchona. The acid is added to the menstruum used for initial maceration, the amount being based on the quantity of drug used, and percolation being effected with neutral menstruum. Hydrochloric acid markedly facilitates extraction of alkaloid, and in the above proportions imparts stability to the preparation, reducing precipitation and holding alkaloids in solution. Glycerin further aids non-precipitation, and is best added to percolate or concentrate. Lactic acid is inferior to hydrochloric acid for extracting alkaloids; hot extraction has no advantages, and may result in formation of phlobaphenes.

**Colourless Solutions of Novocain and of Alkaloids.**—It is a well-known fact that solutions of novocain rapidly assume a yellow coloration on exposure to air, the discoloration setting in all the more rapidly the higher the concentration of the solution. Surgeons refuse to use

such solutions, on the grounds that they exhibit an increased degree of toxicity, compared with colourless solutions, and also possess a lower anæsthetic action than the latter. M. Bridel undertook a series of experiments in the pharmacy of the Hôpital Lariboisière in Paris ("Journal de Pharmacie et de Chimie," March 1, 1923), with a view to elucidating the origin of this yellow coloration and the means to obviate its occurrence. This phenomenon is not due to the presence of adrenalin in the solution of novocain, although its admixture hastens its onset and intensifies the resulting coloration, but is caused by the oxidation of the novocain. He was able to demonstrate by the addition of a glycerin extract of *Russula delica*, which contains a very active oxydase, that under the influence of the latter a solution of novocain assumes a yellow colour already within a few minutes, whereas the same solution, in the absence of this oxidising agent, does not begin to develop a yellow tint until twenty-four hours have elapsed. To obviate oxidation the use of a saturated solution of benzoic acid as the solvent has already been advocated for adrenalin (*C. & D.*, II., 1922, p. 458). However, Bridel found that the use of this solution did not prevent the occurrence of the yellow coloration in the case of 5 per cent. solutions of novocain. As a result of exhaustive tests, Bridel succeeded in solving the problem by adopting the following method, which has been found to yield stable solutions:—

Novocain	...	...	...	...	5 grams.
Solution of adrenalin 1:1,000	...	...	...	...	5 c.c.
Solution of sodium bisulphite (sp. gr. 1.30-1.35)	...	...	...	...	0.3 c.c.
Solution of sodium chloride (0.75 per cent.) and benzoic acid (0.2 per cent.)	...	...	...	...	q.s. ad. 100 c.c.

The novocain is dissolved in 75 c.c. of the boiled solution (to remove the air in the water) of sodium chloride and benzoic acid, the solution of adrenalin and then that of sodium bisulphite are added, then make up to 100 c.c. with the solution of sodium chloride and benzoic acid. Fill the solution into ampoules, seal and sterilise at 110° for 10 minutes. Further investigations by Bridel proved that the presence of a small amount of sodium bisulphite succeeds in preventing the discoloration of solutions of apomorphine hydrochloride, emetine hydrochloride, physostigmine sulphate, and sodium salicylate. Basing on his results, he recommends the use of a solvent containing 0.2 per cent. of benzoic acid, to which an amount of solution of sodium bisulphite corresponding to 1.5 and not exceeding 3 c.c. in 1,000 c.c. of total solution is added. The benzoic acid serves to neutralise the alkali ceded by the glass of the ampoule, while imparting a sufficient degree of acidity to the solution to enable the sodium bisulphite to combine with avidity with the oxygen which otherwise would react with the oxidisable substance present in the solution. In addition, its presence makes it possible to sterilise such ampoules at a temperature of 110° for 20 minutes without producing any discoloration or deterioration of the solution.



## The Progress of Pharmacy and Allied Sciences

### BACTERIOLOGY

**Anthrax Infection by Shaving Brushes.**—The examination of a shaving brush which belonged to a sailor who had developed a typical anthrax pustule showed that while the free hairs of the brush gave a strong growth of anthrax, those embedded in the handle were sterile ("Lancet," I., 1923, 227). Experiments were conducted which seemed to show that the process of fixing the hair-stumps of these brushes with a hot glue-like substance often effectively sterilises the portion of the hair so fixed. Therefore, if anthrax or other organisms do develop from these embedded stumps one can safely assume that they were originally present in the hair. But when the stumps remain sterile one cannot apparently conclude that the hairs were sterile before the brush was made.

**Rhubarb in Bacillary Dysentery.**—An investigation was undertaken to determine the way in which rhubarb acts in this disease and which constituent was responsible for its action, one writer having stated in regard to the treatment of bacillary dysentery that no remedy in medicine has such a magical effect. ("Lancet," I., 1923, 382.) A solution containing all the purgative constituents of rhubarb soluble in water (1 gr. of B.P. rhubarb extract) was allowed to act on *B. dysenteriae Shiga and Flexner* of the bacillus No. 1 of Morgan without affecting growth in the broth tubes. Fresh undiluted ox bile has no distinct action on the bacilli, thus indicating that the therapeutic effect of rhubarb is not due to its cholagogue action. Neither does the serum of a rabbit treated with rhubarb have any germicidal action. The nature of the therapeutic effect of rhubarb in bacillary dysentery therefore still remains obscure.

**Preparation of Peptone.**—F. Bramigk ("Pharmazeutische Monatshefte," No. 2, 1923) recommends the following procedure for preparing a solution of peptone, particularly adapted for bacteriological work:—A pail containing clotted blood is covered with a cloth and the red colouring matter removed by frequent immersion of the pail in running water. The residue, consisting of fibrin, is expressed and then transferred to a flask containing 3,000 c.c. of water to which 15 c.c. of sulphuric acid has been added. This is allowed to stand overnight and on the following day the fibrin is separated, expressed and added to a mixture of 18 c.c. of sulphuric acid and 3,000 c.c. of water at a temperature of 50° containing two pigs' stomachs (from which the mucous membrane has been removed prior to cutting them into small pieces). After standing for 48 hours at 37° the whole is passed through a cloth, and the liquid, after neutralisation with solution of ammonia, is boiled until the supernatant layer becomes clear. The liquid is then decanted and filtered, yielding a solution containing approximately 10 per cent. of peptone.

**New Fermentation Tube.**—At a meeting of the Section of Pathology of the Royal Society of Medicine, on November 21, states the "Lancet" (II., 1922, 1237), Dr. C. E. Dukes described a new fermentation tube to be used in the testing of the fermentation of carbohydrates by bacteria in the presence of peptone. He emphasised the serious alteration which takes place in sugar solutions when sterilised even by steaming in the presence of peptone, and suggested that many of the uncertain reactions recorded in fermentation tests might be attributed to this alteration in the sugar. The new fermentation tube was introduced to avoid this deterioration of the sugar on sterilisation. It is similar to the ordinary Durham's fermentation tube, and is contained in larger test-tubes in a similar fashion, but a small glass cup is fixed to the top of the fermentation tube, and into this cup is placed 0.5 c.c. of a 10 per cent. solution to the sugar to be tested. The surrounding test-tube contains 4.5 c.c. of 1 per cent. peptone water. The test-tubes are sterilised in the autoclave in the upright position, the sugar being thus separated from the peptone. After sterilisation the tube is tilted to an angle of 30 degrees, when the sugar runs

out of the cup and mixes with the peptone, thus giving a 1 per cent. solution of the sugar in approximately 1 per cent. peptone. The tube is now ready for inoculation with the organism to be tested. The advantages claimed for the new fermentation tube are that this method of testing sugar reactions is more accurate since no deterioration takes place in the sugar during sterilisation if it be separated from the peptone, that a more delicate indicator can be employed, that the method is rapid, simple, and economical.

**Pfeiffer's Bacillus.**—The group of bacteria of which Pfeiffer's bacillus is the best known and most representative has been investigated by Dr. Martin Kristensen, of Copenhagen ("British Medical Journal," I., 1923, 118). The researches extended over a period of four years, 1918-1922, and the study of Pfeiffer's bacillus is based on the detailed examination of 800 individual strains of the organism. The investigation of the incidence of Pfeiffer's bacillus involved the examination of 2,000 persons. In cases of influenza Kristensen found the Pfeiffer organism most often in the couple of days after the onset. He does not, however, regard the bacillus as the primary infective agent of influenza. He states that Pfeiffer's bacillus is mainly adapted to living in the mucous membranes of the respiratory tract in man. In healthy persons it is able to exist for a time, but only with difficulty. Its ideal conditions for development are in mucous membranes already in a catarrhal state, but the nature of the infection producing the catarrh is a matter of indifference: it may be influenza taken in its widest sense, whooping-cough, measles, or tuberculosis. Its growth is also favoured, but to a less extent, by infections which involve a more limited area of mucous membrane—for example, angina, diphtheria, etc., or even catarrh produced by non-bacterial causes. In the initial stages, an influenza epidemic spreads over a population, the majority of whom do not harbour Pfeiffer's bacillus. In the early cases Pfeiffer's bacillus is only exceptionally met with, but in those patients in whom it is present it will multiply rapidly and spread to others, and also to healthy persons who may become infected with influenza as well as with Pfeiffer's bacillus, or with Pfeiffer's bacillus without developing influenza, for under the new conditions the bacillus is likely to acquire an improved capacity of developing in normal persons. . . . In this manner the bacillus gradually spreads until it is present in almost every influenza patient and in a number of healthy individuals as well. Perhaps this microbe eventually acquires so great an increase in its vitality that it thrives not only in healthy persons, but also may be able by itself to produce infectious resembling influenza. When the influenza dies out Pfeiffer's bacillus may exist in normal people for some months still, but as it is incapable of living for a prolonged period as a pure saprophyte it will, as before the influenza appeared, gradually be limited to occurring in endemic diseases. Should further investigations substantiate this view it may eventually be desirable to change the name *B. influenza* to *B. catarrhalis*. The prophylactic use of a vaccine of Pfeiffer's bacillus accordingly obtains material support from these studies.

### BOTANY

**Plant Hormones?**—The conductivity of excitation in plants has long been a subject of speculation, but this is taking on a definite phase at last. Dr. U. Ricca ("Nuovo Giornale Botanica Italiana," 1916) confirmed Dutrochet's statement that the path of conduction in mimosa ("sensitive plant") is the wood. His results clearly suggest the movement of a stimulating substance with the water current. Stark ("Jahrbuch für wissenschaftliche Botanik," 60, 1921) finds that the tip of the cotyledon of a grass seedling which has been cut off and stuck on again with gelatin is still capable of responding to contact stimulus, excitation passing through the layer of gelatin. It would appear from the results of both these workers that the stimulating substance can be obtained in watery extract.



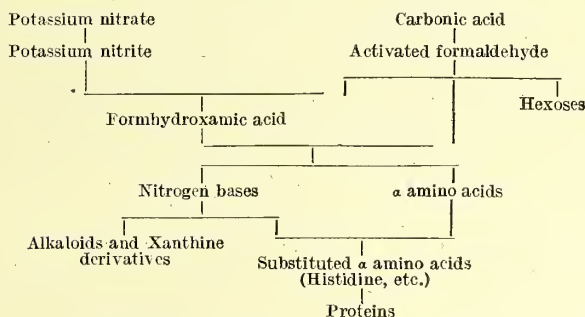
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**Deep Rooting Systems.**—Professor J. E. Weaver, F. C. Jean, and J. W. Crist have been studying root systems of crop plants *in situ* ("Development and Activities of Roots of Crop Plants," Carnegie Institution of Washington, 1922). Their results show that cereals possess two distinct groups of roots. The upper shallow rooting system is that in the first six or eight inches of soil, usually regarded as most important in plant nutrition. Experiments proved that the lower or deep-rooting system supplies as much or even more water from a depth of three feet than is derived from the surface soil. Fertilisers are freely removed from depths down to two and a half feet (barley and potatoes) and even five feet (maize). The authors conclude that "the deeper soils are not only suited to plant life, but that they play an exceedingly important part in the life of the plant."

**Photosynthesis.**—Proof is accumulating of the reality of formaldehyde in "activated" form being the intermediary in both carbon assimilation and protein synthesis. Professor E. C. C. Baly, at the Hull meeting of the British Association last year, stated that there is little doubt that the formation of formaldehyde in the leaf takes the following course:—

- (1) Chlorophyll A +  $H_2CO_3$  + light = Chlorophyll B +  $HCHO$ .
- (2) Chlorophyll B + Carotin = Chlorophyll A + Xanthophyll.
- (3) Xanthophyll + light = Carotin + oxygen.

Radiation energy equivalent to 150,000 calories is required to convert one mole of carbonic acid into formaldehyde and oxygen, and this can be supplied in a single "quantum" by radiation at wave-length  $200\mu$ . The photosynthesised formaldehyde is extraordinarily reactive, polymerising rapidly into carbohydrates and, in presence of nitrites, into formhydroxamic acids, and thence into amino-acids and nitrogen bases. Professor Baly and his co-workers ("Transactions of the Chemical Society," 1922, 121, p. 1078) state that the formation of nitrogen products actually takes precedence, hexoses being formed when activated formaldehyde is in excess. The scheme put forward as indicating the main lines of photosynthesis is as follows:—



The enhanced reactivity of freshly synthesised molecules is the key to the problem of reactions taking place in plants which are impossible to realise in the laboratory. The synthesis of nitrogen products in plants is photosynthetic only so far as formation of activated formaldehyde is concerned, but this necessarily restricts the region of synthesis to the leaves. As synthesis of hexoses is concurrent with nitrogen compounds, the conditions are ideal for the formation of glucosides: indeed, the authors consider that nitrogenous products are translocated as soluble glucosides. Professor Baly, in a letter to "Chemistry and Industry" for March 16 (p. 256), states that "rightly or wrongly, I hold the view that photosynthesis is the real driving force behind all life, and that the plant is the living mechanism developed from photosynthesis. In short, I venture to believe the chemicals make the plant. . . . It leads one to believe that the vital processes of the higher animals are equally simple, and so perhaps it may be that the chemistry of their derangement or disease is simple, too."

### ANALYTICAL CHEMISTRY

**Nitrites in Drinking Water.**—G. Rodillon ("Journal de Pharmacie et de Chimie," November 16, 1922), describes a new test for the presence of nitrites in water, easily applied in all cases when an opinion is required regarding the potability of a water intended for domestic uses. A solution is prepared of 3 gm. of white resorcin in 50 gm. of pure sulphuric acid, which yields a liquid with a faint greenish-yellow colour. To apply the test, fill a test tube about two-thirds full with the water to be tested, and carefully pour 3 to 4 c.c. of the above test solution along the side of the test-tube, without mixing the contents. In the presence of nitrites, a rose-coloured ring is formed in the aqueous layer, just above the sulphuric acid solution. This test may be used to determine the content of nitrites in drinking water, by the colorimetric method, by comparison with standard solutions of various concentration of pure sodium nitrite.

**Barium in the Harrogate Waters.**—Barium rarely occurs as a constituent of European mineral waters, due, no doubt, to the considerable amount of sulphates present ("Lancet," I., 1923, 22). While toxic in higher concentration, when administered in suitable doses barium exerts a marked stimulating action upon all forms of muscular tissue, and causes a gradual but sustained rise in blood pressure. It has been shown that barium enables a purgative water to be taken continuously without resultant enervation. The substance is therefore a valuable constituent of the Harrogate waters, in which it occurs. The accepted dosage of barium chloride is from 0.016 to 0.12 gr., and this is the equivalent of 5 to 34 of the "Old Sulphur Spring" water. It is of interest to note that while the solubility of barium sulphate is only 1 in 400,000 in pure water, soluble barium and sulphate actually exist to the extent of 1 in 140,000. The presence of magnesium and ferric chlorides probably increases the solution capacity of the water for barium sulphate.

### BIOLOGICAL CHEMISTRY

**The Effect of Histamine** (3-iminazolyethylamine) in small doses on the human gastric secretion has been recently investigated ("Lancet," I., 1923, 482). Observations were carried out on twelve hospital patients; results showed that histamine, in small subcutaneous doses, excites a flow of gastric juice in man. The peptic activity in creases after the injection and reaches its maximum, usually, in about 5-15 minutes. Both total and free hydrochloric acid increase and attain their maxima shortly after the pepsin maximum is registered. The secretory-rate follows a similar course, and usually attains its maximum last of all. The dose employed to evoke gastric secretion does not produce any harmful gastric or general disturbance. It consequently seems possible that histamine may be employed as a means of investigating the state of gastric secretory function, and, perhaps, as a therapeutic agent.

**Influence of Codeine on the Digestion of Meat.**—Previous investigations undertaken by E. Zunz and A. Delcorde have shown that foodstuffs remain for a longer period in the stomach under the influence of opium than is the case with morphine alone. The authors thereupon decided to investigate the action of codeine hydrochloride on the digestion of meat in dogs ("Archives internationales de Pharmacologie et de Thérapeutique," Vol. XXVII., No. 1 and 2). Their results show that codeine hydrochloride increases the duration of the sojourn of boiled meat in the stomach of dogs, but to a lesser degree than is the case with morphine hydrochloride, tincture of opium, or a tincture of opium from which the morphine has been removed. Codeine inhibits for a time the action of the digestive juices of the stomach, but to a lesser degree than morphine and the other opium alkaloids.

**Vitamin A in liver of rat.**—The occurrence of vitamin A in various glandular organs of the body has been reported by several investigators ("Lancet," I., 1923, 124).



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No attempt was made to determine the minimum dosage of any particular tissue necessary to restore growth in rats which had become steady in weight on a diet deficient in vitamin A (the only means at present known of estimating the vitamin content). It was decided, therefore, to investigate the influence of the diet of the rat on the storage of this factor in the liver. The result of the investigations showed that the concentration of vitamin A in the liver of the rat varies with the concentration of this factor in the diet. On being deprived of vitamin A the rat ceases to grow apparently before the store of vitamin in its liver is completely exhausted, and it would appear from this that a reserve is necessary for some function of the animal body other than growth. Confirmation of this has recently been obtained.

**Concentration and Mode of Action of Vitamin A.**—Professor J. C. Drummond and K. H. Coward, in a paper communicated to the Biochemical Society on December 11, 1922, stated that Vitamin A is almost quantitatively transferred to the unsaponifiable portion of cod-liver oil if oxidation is prevented. All the cholesterol can be removed by crystallisation from methyl alcohol and precipitation with digitonin, the physiological activity remaining entirely in the filtrate. The active fraction is free from nitrogen, iodine, sulphur, or phosphorus. The potent substance is volatile under steam distillation *in vacuo*, but no sharp separation occurred, while considerable loss resulted. W. Cramer, in a communication to the same Society on February 12, 1923, shows that withholding fat-soluble vitamin A results (in the case of rats) in producing an atrophic condition of the intestinal mucous membrane. This is sufficient to account for general effects, including cessation of growth. It confirms the view previously expressed that the mode of action of vitamins is "a drug-like specific stimulating action on certain parts of the digestive tract," and in this respect resembles that of hormones.

**Vitamin Content of Proprietary.**—The following preparations have been examined in regard to their vitamin content: Metagen, maltoline, robeleine, virol, vitmar, Mellin's food ("British Medical Journal," I., 1923, 14). The results recorded show that the preparations contain vitamins A and B except maltoline, in which case the tests failed to show the presence of vitamin A in the quantities tested. A comparison between the vitamin content of the proprietary preparations and the vitamin content of those ordinary foods which are rich in vitamins shows that the former contain less vitamins than the latter. The vitamin A content of the proprietary foods was in all cases less than that of butter obtained from grass-fed cows, and less than one-hundredth that of active specimens of cod-liver oil. The vitamin B content of the proprietary foods was in all cases less than that of wheat germ or of yeast. Mellin's food is mixed with milk; if the food is mixed with milk in the proportion of a teaspoonful of food to two tablespoonfuls of milk the vitamin content (A and B) of the food will raise the vitamin content of the milk. The vitamin content of Mellin's food may therefore be sufficient to be of value in cases where an infant is being fed on milk which has a low vitamin content. As regards the other preparations, none of them can be said to contain a rich, abundant, or concentrated supply of vitamins. None of them can be considered to be a substitute for cod-liver oil as a source of Vitamin A, for in no case does the total daily adult dose of the proprietary food contain as much as one-tenth of the vitamin A content of a teaspoonful of cod-liver oil. No opinions are expressed in regard to the merits of the foods in other respects. The experiments recorded in the present paper show that in none of the cases examined have the manufacturers succeeded in concentrating vitamins on the commercial scale. Under normal conditions of life an adequate supply of vitamins can be easily ensured by including in the diet a suitable amount of "protective foods," such as milk, butter, green vegetables, and fruit, and no advantage is to be gained by trying to obtain these substances in the form of drugs.

**Insulin.**—The anti-diabetic hormone of the pancreas is attracting attention scientific and polemical. The points of interest to pharmacists are its preparation and standardisation. The existence of this endocrine substance has long been suspected, and its actual origin suggested in the "islets of Langerhans" of the pancreas. Lepine in 1909 suggested that diabetes mellitus was due to lack of this hormone, but administration of pancreatic extracts only gave temporary and uncertain improvement. The success of the Toronto researches by F. G. Banting and C. H. Best were due to using extracts from fetal glands in which only islet tissue was present and enzyme activity (trypsin) absent. This led to the preparation of an active extract from normal ox pancreas, degradation by enzyme activity being prevented by the use of alcohol. The process of preparation now used is that of J. B. Collip. This consists substantially of mixing fresh minced ox pancreas with an equal volume of 95 per cent. alcohol and straining. The extract is diluted with twice its volume of 95 per cent. alcohol and precipitated, whereby protein is removed. The solution, after concentration at 18° to 30° C., is extracted with ether (to remove fats), and then re-evaporated to a pasty consistency. The paste is extracted with 80 per cent. alcohol, and this solution on pouring into absolute alcohol deposits the hormone mixed with other substances. Insulin is water-soluble, contains no lipoids, and is free from salts and alcohol soluble matter. The purification is necessary owing to danger of "anaphylactic shock" following the injection of proteins. It is hoped to isolate it in pure condition for identification and possible synthesis, as in the case of adrenalin. The administration of insulin restores normal blood-sugar level in diabetics (hyperglycemia). Its action of inducing hypoglycemia is the basis of the provisional pharmacological standardisation of extracts containing insulin. A unit dose is that which will on subcutaneous injection reduce the percentage of blood-sugar in a rabbit of two kilograms weight (starved for sixteen to twenty-four hours) to 0.045 per cent. At this low level characteristic symptoms appear which terminate fatally, taking the form of convulsions with intervals of coma. On the other hand, an overdose of insulin is rectified at once by an injection of sugar. In experimental animals insulin also restores the normal balance between glycogen and fat in the liver and re-establishes a normal glycogen content of the heart. The problem still to be solved is whether insulin will stimulate the pancreas in diabetic persons to recovery of its normal function, as insulin is used up in the catabolism of sugar, and thus requires continual renewal.

### PURE CHEMISTRY

**Isotopes.**—The first report of the International Commission on Chemical Elements appointed by the International Union of Pure and Applied Chemistry includes, *inter alia*, a table of isotopes and a table of constants of radioactive elements. This states also that a *chemical element* is defined by its *atomic number*, which represents the excess of positive over negative charges in the constitution of the atomic number. Each chemical element may be simple or complex, according as its atoms are all of equal mass or not. In the latter case, the element consists of as many isotopes as its atoms have different masses. The masses of the isotopes are all given as whole numbers. It is curious that while this "whole number rule" has been accorded almost universal recognition, Aston ("Nature," 1922, 109, 813) records a definite divergence from it in the case of tin; hitherto hydrogen has been the only exception.

**Hafnium, Celtium, or Oceanum?**—Professors Coster and Hevesy are proceeding apace with their investigation of the new element of atomic number 72, which they term hafnium. They consider that ordinary zirconium contains 0.01 to 0.1 per cent. of the new element ("Nature," 1923, 79); and in subsequent issues of the *same* journal it is shown that a zirconium free from hafnium has been prepared, and a preparation containing 90 per



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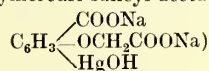
cent. of hafnium has been made. Spectroscopic methods place the content of hafnium in zirconium minerals at between 5 and 10 per cent. G. Urbain and A. Durvallier reaffirm their claim to the name celtium for element of atomic number 72, which they assign to the rare earths with properties intermediate between lutecium and scandium. Professors Coster and Hevesy uphold the contention that hafnium is a new element, the analogue of zirconium, and that its  $x$ -ray spectrum is quite different from that of celtium. H. M. Hansen and S. Werner, of Copenhagen University, have examined specimens containing 90 per cent. of hafnium (the spectral lines of which element were the most intense in the spectrum) without finding the slightest trace of Urbain's lines. Dr. Alexander Scott proposes the name oceanium for the new element of atomic number 72, obtained from a sample of black iron sand from New Zealand ("Transactions of the Chemical Society," February 1). The sand is titaniferous, and presumably the element belongs to the titanium-zirconium group. The approximate atomic weight obtained is 175. A sample of the oxide has been sent to Copenhagen for spectrographic comparison with hafnium.

### PHARMACEUTICAL CHEMISTRY

**Solubility of Emetine Bismuth Iodide.**—Dr. Martindale has pointed out ("Lancet," I., 1923, 158) that if emetine bismuth iodide is shaken up with 0.2 per cent. hydrochloric acid, an opalescent liquid is formed, containing the bismuth as oxychloride and emetine in solution. The solubility of the alkaloidal portion of the compound in physiological acid, especially at body temperature, completely upsets the theory under which the compound was introduced.

**Ergotamine.**—A. Stoll ("Schweizerische Apotheker-Zeitung," 1922, pp. 341, 358, 374) has succeeded in isolating a hitherto unknown alkaloid from ergot, to which he has given the name of ergotamine. Powdered ergot is treated with a faintly acid solvent, such as a solution of aluminium sulphate, whereupon the vegetable acids, colouring matter and phytosterin are removed by extraction with ether and benzol. The residue is then treated with an alkali, which liberates the base. The latter is extracted by ether and benzol, and on evaporation of the solvent, ergotamine is obtained, which can be recrystallised from aqueous acetone. Its chemical composition is  $C_{33}H_{45}N_5O_5$ , and in alcoholic solution, particularly on heating the latter, it is transformed into an isomeric compound, ergotaminine, which crystallises in scales. A therapeutic investigation of ergotamine showed that in a dilution of 1:10,000,000 it exhibited the characteristic effects of ergot.

**Mercurosal.**—The comparative toxicity of mercurosal (di-sodium-hydroxymercuri-salicyl-acetate



is the subject of a communication by L. W. Rowe to the American Pharmaceutical Association ("Journal A.Ph. A.," 1923, p. 8). This substance, tested in the medical research laboratories of Parke, Davis & Co., is only one-fifth as toxic as other compounds of mercury (bichloride, iodide, salicylate, or succinimide). Another advantage is that the wall of the vein near the site of injection is not affected. A physiological control over mercurosal is maintained, as is necessary in the case of other antisyphilitic agents such as arsphenamine (salvarsan), which vary in toxicity according to mode of preparation. The toxicity of mercurosal is not affected by contact with alcohol, ether, or aldehydes.

**Variation in Toxicity of Arsenic** is the subject of a report by E. W. Schwartz, of the U.S. Department of Agriculture's Pharmacological Laboratory ("Journal American Pharmaceutical Association," 1923, p. 12). The potency

of white arsenic (arsenic trioxide) varies to a marked degree in the undissolved state, dependent upon fineness of powder. It is easy to find preparations only a fifth to an eighth as toxic as dissolved arsenic. This correlates with laboratory observation that rate of solution in water is very slow and to a great extent dependent upon fineness of particles exposed to solvent action. Particles of intermediate size adhere to mucous membrane, and produce ulcers, but larger ones are easily pushed down the intestine, while small particles probably dissolve before any or much damage is done to the internal mucosa. The ideal remedy suggested is discontinuation of medication of arsenic in undissolved form by notice in the new U.S. Pharmacopoeia. However, if arsenic trioxide of extreme fineness (0.0125 to 0.0025 mm.) were required by Pharmacopoeial standard, "the difference in potency between this and dissolved arsenic could be neglected." The author considers habituation to arsenic has not been proved; it may be due to "arsenic eaters" not dissolving the poison.

**Anæsthetic Action of Pure Ether.**—Investigations have been undertaken to settle the questions raised by the statement that pure ether has little or no anæsthetic action, and these included an examination of the preparation known as "ethanesal" ("Lancet," I., 1923, 424). Absolutely pure ether was obtained by a method described and tests carried out on animals and human patients. The investigators concluded that no support could be given to the statements that pure ether is devoid of anæsthetic action, and that the activity in this direction of ordinary ether is due to impurities. On the contrary, so far as the anæsthetic action of ether is affected by purification, it is in their experience improved by the removal of impurities, which irritate the respiratory mucosa and cause excessive secretion, but otherwise unchanged. The purest ether is the best, as an anæsthetic. Samples of "ethanesal," as purchased from the makers, have been found to consist essentially of ether with about 4 per cent. of normal butyl alcohol and a small quantity of an aldehyde. There was no evidence found to warrant the attribution of its anæsthetic properties to any other constituent than the ether, and no reason for supposing that the presence of the added substances materially affects any property of the ether vapour, except the flavour.

**Determination of Cantharidin.**—G. Marchiolo ("Bollettino Chimico Farmaceutico," No. 3, 1923), in a review of the various methods suggested for the extraction of cantharidin, and for its determination in various preparations, suggests the use of formic acid as a solvent. Twenty grams of finely powdered cantharides is introduced into a separator, 200 gm. of formic acid (20° Bé.) and, 30 minutes later, 200 gm. of water are added. After standing for 24 hours the liquid is drawn off and the residue repeatedly washed in water; the collected liquids are then filtered and evaporated to dryness on a water bath, leaving pure cantharidin and colouring matter. The residue is treated with just sufficient concentrated sulphuric acid to dissolve the cantharidin and to destroy the colouring matter present, whereupon the former is precipitated by the addition of water to the sulphuric acid solution, and dried. To remove the impurities still present, the cantharidin obtained by this method is treated with boiling alcohol and petroleum ether, or better still, recrystallised from ethylformic ether. Marchiolo has found a specific colour reaction of cantharidin:—A few crystals of cantharidin are placed on a slide and moistened with a drop of the following mixture:—

Sulphuric acid	...	...	...	10 grams.
Chromic acid	...	...	...	5 grams.
Distilled water	...	...	...	5 grams.

After a few hours a faint green colouration appears, which in the course of a few days becomes visibly yellowish-green.



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**Mercuric Compounds of Hexamethylenetetramine.**—The observation that the presence of the amine group in organic compounds of arsenic increases considerably the antisiphilitic action of these substances induced Douris and Beytout ("Répertoire de Pharmacie," March 10, 1923) to investigate whether the introduction of amine groups into mercuric salts would similarly enhance the value of the latter in the treatment of syphilis. For this purpose they utilised hexamethylenetetramine, which they succeeded in combining with mercuric sulphate, mercuric cyanide, and with mercuric acetate. To obtain the first, mercuric sulphate is dissolved in fifteen parts of water, to which sulphuric acid is added drop by drop in order to avoid the precipitation of mercuric subsulphate; the solution is then added to an equimolecular solution of hexamethylenetetramine in three parts of water. A white precipitate is obtained which crystallises in fine needles, having the formula  $(\text{CH}_2)_6\text{N}_4\cdot\text{SO}_4\text{Hg}\cdot\text{H}_2\text{O}$ , and containing 44.16 per cent. of mercury. It is only slightly soluble in water, and is decomposed by boiling water. The double salt of mercuric cyanide and hexamethylenetetramine is prepared by mixing a warm, aqueous solution of mercuric cyanide with a highly concentrated solution of hexamethylenetetramine in water. The resulting compound contains 61.94 per cent. of mercury, and on heating undergoes a change at  $208^\circ$ , decomposing at  $216^\circ$  without melting. By mixing in the cold equimolecular aqueous solutions of mercuric acetate and hexamethylenetetramine the authors succeeded in obtaining a double salt containing 83.2 per cent. of mercury. Experiments proved that the presence of hexamethylenetetramine in these compounds considerably diminishes the more or less corrosive action of the mercuric salt in question, and at the same time increases very markedly the specific therapeutic effect.

**Cinchona Febrifuge.**—In the annual report (1921) of the Institute for Medical Research, Kuala Lumpur, a section refers to the merits of cinchona febrifuge in the treatment of malaria. The report recalls Major H. W. Acton's experiments carried out at the British Malaria Convalescent Depot at Dagshai, suggesting that the mixed alkaloids are less toxic than quinine, and superior to it in the treatment of tertian ague. The average composition of cinchona febrifuge is as follows:—Crystallisable alkaloids (54.65 per cent.), quinine 7.40, quinidine 22.83, cinchonine 18.58, cinchonidine 5.84 per cent.; uncrystallisable alkaloids, ash, etc., 45.35 per cent. It is estimated that nearly 20,000 lbs. of quinine are imported annually into British Malaya; quinine costs at least \$28 a lb., whereas cinchona febrifuge costs less than \$7 a lb., so that an enormous saving would be effected by the substitution of the unseparated mixture for general use. Only a small amount of the Indian cinchona febrifuge was available; its immediate effects upon malaria were found to be as powerful as those of quinine. Another preparation containing the total alkaloids derived from Javan cinchona bark, also sold under the name of cinchona febrifuge, is made by the Bandoengsche Kininefabriek Company. The average composition is stated by the makers to be as follows:—Crystallisable alkaloids (62.8 per cent.), quinine 11.5, quinidine 5.0, cinchonine 26.3, cinchonidine 20.0; uncrystallisable alkaloids, ash, etc., 37.2 per cent. A quantity of this Javan preparation was obtained and tested upon a small number of patients suffering from quartan malaria, which form of the disease is more rare, and probably more liable to relapses, than the tertian fevers. The results indicated that the permanent therapeutic effects of the Javan cinchona febrifuge are at least as good as those of quinine, and its toxicity was found to be no greater than quinine toxicity. The report points out, however, that, until the composition of cinchona febrifuge has been legally defined, powders deficient in alkaloids, or containing harmful alkaloids, may be sold under that name.

**Activity of Hypnotics of the Barbituric Acid Series.**—Researches by H. A. Shonle and A. Moment in the laboratories of Eli Lilly & Co., Indianapolis ("Journal of the

American Chemical Society," 1923, p. 243), have resulted in the preparation of several new hypnotics of the barbituric acid series. Of the aliphatic derivatives, iso-amyl-ethyl-barbituric acid (m.p.  $154-156^\circ\text{C}$ .) is found to be the most active and least toxic. Contrary to expectation, the introduction of the benzyl group into barbituric acid did not accentuate the sedative action, but rather the reverse. Thus benzyl-ethyl-barbituric acid is more hypnotic than barbital, but causes tetanic convulsions in dogs, which is a characteristic of the series of benzyl alkyl-barbituric acids. The relative activity of derivatives of barbituric acid administered subcutaneously to rabbits is given in the following table, the dose being in grams per kilogram of body weight:—

Derivative of Barbituric Acid	Molecular Weight	Dose for Inability to Rise when shaken (Gm.)	Toxic Dose (Gm.)	Ratio
Mono-ethyl	156	0.50 (slight symptoms)	—	—
Mono-benzyl	218	0.50 (ineffective)	—	—
Mono-butyl	184	1.00 (ineffective)	—	—
Di-methyl	156	0.75 (ineffective)	—	—
Di-ethyl	184	0.15	0.25	1 to 1.7
Di-propyl	212	0.06	0.22	1 to 3.7
Propyl-iso propyl	212	0.05	0.15	1 to 3.0
Di-n-butyl	240	0.35 (dizzy and drunk next day)	0.50	1 to 1.4
Di-benzyl	308	0.50 (ineffective)	—	—
Iso propyl-ethyl	198	0.10	0.20	1 to 2.0
Iso butyl-ethyl	212	0.05	0.12	1 to 2.4
N-butyl-ethyl	212	0.04	0.10	1 to 2.5
Sec-butyl-ethyl	212	0.05 +	0.20	—
Iso amyl-ethyl	226	0.04	0.17	1 to 4.2
Iso amyl-propyl	240	0.08	0.22	1 to 2.8
Benzyl-ethyl	246	0.04 (convulsions)	0.06	1 to 1.5
Benzyl-iso propyl	260	0.20	0.35	1 to 1.8
Benzyl-propyl	260	0.20 (convulsions)	0.45	1 to 2.3
Phenyl-ethyl	232	0.08	0.15	1 to 1.9

It will be seen that the ratio of the toxic dose to the dose producing unconsciousness increases with increasing molecular weight and then decreases. High activity and low toxicity are associated with iso-amyl-ethyl-barbituric acid, which in rabbits is four times, and with dogs twice, as active a hypnotic as diethyl-barbituric acid (veronal).

**Veratrum Root.**—An extended investigation of commercial lots of *Veratrum viride* Aiton (American or green hellebore) and *Veratrum album* (white or European hellebore) has shown, states the Bureau of Chemistry of the United States Department of Agriculture, a wide variation in composition and in many instances excessive quantities of total ash and of acid-insoluble ash. The quantity of alkaloids found ranged from 1 to over 2 per cent., the quantity of total ash from 2.9 to 19 per cent., and that of the acid-insoluble ash from 0.5 to over 15 per cent. On the basis of the data obtained, the Bureau is of the opinion that veratrum root from either source when intended for use as a drug should contain not more than 8 per cent. of total ash nor more than 4 per cent. of acid-insoluble ash, and not less than 1 per cent. of alkaloids when assayed by the following method:—

Add 150 c.c. of chloroform-ether (equal parts) to a 15-gram sample (No. 40 powder) in a 250-c.c. flask, and allow it to stand 10 minutes. Add 10 c.c. of 10 per cent. ammonia and shake at frequent intervals. At the end of 60 minutes add 10 c.c. of water, shake thoroughly, and allow the crude material to settle. Decant the liquid through a pledget of cotton into a flask containing about  $\frac{1}{4}$  gram of calcined magnesia. Shake the mixture, filter into a 100-c.c. graduated cylinder, and transfer 80 c.c. of the filtrate (considered



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equivalent to 8 grams of the drug) to a separatory funnel. During the entire operation care should be taken to avoid any loss of the liquid from evaporation. Shake out the filtrate in the separatory funnel four times, using 20, 20, 10 and 10 c.c. of 10 per cent. acetic acid respectively. Collect the extractions in a separatory funnel, make alkaline with 10 per cent. ammonia, and shake out four times, using 20, 20, 10 and 10 c.c. of chloroform-ether respectively. Collect the extractions in a tared beaker, evaporate by passing a slow current of air over the liquid, and dry to practically constant weight at 100° C., making the weighings at 30-minute intervals.

**Properties of Colloidal Metals.**—The clinical literature associated with the therapeutic action of metals in colloidal form is very extensive, and the results recorded extremely remarkable ("British Medical Journal," I., 1923, 273). An examination of the clinical literature further shows that the great mass of it is wholly uncritical, and that the few animal experiments and therapeutic observations which have been made with proper controls have mostly been of negative results. The author of this monograph investigated the properties of certain of the colloidal preparations advertised, and these were certain of the collosols (Crookes' Laboratories) and of the oscols (Oppenheimer & Son, Ltd.). The chief point to be determined was whether all or any of the active principles in the various preparations were in true colloidal suspension. The manufacturers apparently rely upon ultramicroscopical examination for determining the state of suspension of the metal, for they emphasise in their advertisements that the preparations show Brownian movement under the ultramicroscope, and state that this is evidence of the colloidal nature of the preparations. The author goes on to show how the ultramicroscope cannot give any reliable evidence as to whether metals mixed with an excess of organic matter are in a colloidal state. Ultrafiltration experiments are tabulated showing that the whole of the metal present in oscol ferrum and oscol argentum is in colloidal form, and it does not pass into true solution on exposure to air. Collosol antimonium and arsenicum and oscol arsenicum and stibium all appear to contain a mixture of colloidal and non-colloidal metal, but on exposure to air the metal tends to pass into true solution. The analyst's report on collosol iodine contains the statement that "the iodine is present in the form of a plain aqueous solution of simple character; the addition of gelatin is without influence on its molecular nature or activity. Therefore, the iodine is in no sense colloidal." The figures supplied by the analyst also agree closely with the author's Collosol iodine is, of course, very unlikely to cause iodism, for, according to the analysis, a litre of collosol iodine only contains 6 grains of iodine (free and combined), and the dose recommended by mouth of collosol iodine is from 2 to 8 c.c. Experiments were conducted with collosol and oscol iodine which showed that these preparations apparently suffer exactly the same fate in the body as does ordinary iodine. Arsenical and antimonial colloidal preparations were also subjected to examination, with results which showed that "in mice tartar emetic is superior to either collosol antimonium or oscol stibium as a trypanocidal agent, and there is no pronounced difference between the activity of arsenious acid and collosol arsenicum." With regard to the pharmacological action of colloidal metals, while colloidal silver has a disinfectant action only one-tenth as strong as silver nitrate, the author stated that the slowly exerted disinfectant action of colloidal metals may be of considerable therapeutic value. The chief therapeutic action of colloidal metals when given intravenously appears to be that they produce a general reaction similar to that produced by the injection of peptones or non-specific vaccines. Since many of the collosols and oscols contain breakdown products of proteins in considerable amount as protective colloids, the injection of such preparations is particularly likely to produce the reac-

tion known as protein shock. Unfortunately, our present information as to the value of non-specific protein therapy is so vague that the knowledge that colloidal preparations may belong to this class of preparation gives little exact guidance to their therapeutic value. The pharmacological tests employed failed to show any marked difference between the action of the "colloidal" preparations tested and the action of the same substances in true solution.

### Pepsin and Rennin Characteristics Compared.

Frederick Fenger, of the Armour Research Laboratory in Organotherapeutics, gives a comparison between the chemical and physiological characteristics of pepsin and rennin in the "Journal of the American Chemical Society," 1923 (p. 249). The author finds they are proteins widely differing in properties. Pepsin is colloidal and coagulable. Rennin is a decomposition product of protein, of acid albumin type, not precipitated by boiling the solution. Crude pepsin was made from the fresh glandular layer of the fundus portion of hog stomachs by mincing, digesting with acidulated water, filtering the golden-yellow liquid, and drying. The powder has a proteolytic power of 1:2,000 to 1:4,000. Removal of mucin and other inert proteins yields a purified pepsin of a power of 1:10,000. Pepsin testing 1:25,000 was prepared by fractional precipitation and dialysis of the mucin-free material, the main bulk not dialysing through parchment membranes. Purified pepsin is completely soluble in saturated sodium chloride solution, the precipitation from the crude form being effected mechanically along with that of associated proteins. Purified pepsin has excellent keeping properties in dry form. Its proteolytic and milk-curdling activity are identical. Rennin was produced from the mucous lining of the fourth stomach of young calves by the usual salting-out process. Attempts to purify by dialysis in neutral or acidulated aqueous solution was invariably fatal to the milk curdling enzyme. The following method was finally adopted for separating the rennin:—

Vacuum dried, defatted, and powdered mucous linings from calves' stomachs were macerated with 20 volumes of distilled water. The mixture was then acidulated with hydrochloric acid and again macerated for a few hours, and the liquid separated by centrifuging. To the filtered liquid sodium bicarbonate was cautiously added until reaction remains faintly acid to litmus. The slow separation of rennin as colloidal masses is facilitated by adding 2 volumes of water and refrigerating over night. After decantation of liquid and centrifuging, precipitate in centrifuge washed several times until free from chlorine. The white precipitate was suspended in water and neutralised (to methyl orange) with dilute hydrochloric acid, when rennin goes into solution, leaving most of the mucin, etc., in suspension. High-speed centrifuging yielded a clear supernatant liquid. Precipitation and washing processes were repeated until rennetic activity ceased to increase. The clear liquid finally obtained was dried *in vacuo* over sulphuric acid at room temperature. The finished product appears as transparent pale straw-coloured scales.

Physiologically active rennin is formed by action of hydrochloric acid, and possibly pepsin, on some native protein secreted by the gastric mucosa of suckling calves. Its properties are characteristic of acid albumins. Rennin dialyses through parchment, but is hydrolysed in the process. It is precipitated on saturating the liquid with sodium chloride. The rennin precipitated *just before neutrality* to litmus is inert, or nearly so, but activity is restored when sufficient acid is added to make protein water soluble again. The union of acid and protein is very loose, dissociation occurring gradually even in dry powder, rendering enzyme partly insoluble. Its activity is fully restored by replacing lost acid, and the dissociation is responsible for the usual statement that rennin preparations deteriorate rapidly. Proteolytic activity does not seem to be a part of the true physiological characteristics of rennin. The progression in curdling power of milk was as follows:—Straight desiccated linings of calves' stomachs 1:2,000 to 1:5,000; salted-out rennin (prepared by salting-out process and containing 23 per cent. of sodium chloride) 1:591,000; purified rennin 1:2,310,000.



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Addition of 0.18 per cent. hydrochloric acid to straight desiccated lining testing 1:4,500, increased curdling power to 1:49,000, and with 0.36 per cent. hydrochloric to 1:138,000, in consequence of activation by acid of inactive form of rennetic enzyme.

**Assay of Dried Thyroid Gland.**—The organotherapeutic commission of the Paris Society of Pharmacy entrusted R. Fabre and H. Penau with the task of elaborating a satisfactory method of assaying the iodine content in powdered thyroid gland, and the results of these investigators have been published in the "Journal de Pharmacie et de Chimie," No. 3, 1923. In the first place, powdered thyroid gland, dried at 105° until constant weight (about six hours), should not lose more than 6 to 10 per cent. of moisture. After reviewing the various methods in use for determining the iodine content of thyroid gland, Fabre and Penau propose the following procedure, which can be carried out in any laboratory: 1.1 gram of thyroid powder is placed in a nickel crucible, mixed with 4 c.c. of alcohol, then adding 5 c.c. of a 20 per cent. chemically pure solution of potassium hydroxide. After three to four hours, during which the mixture is frequently stirred with a nickel spatula, the crucible is placed on a cold-water bath which is slowly brought to boil, boiling being continued until a syrupy, varnish-like residue remains in the crucible. This residue is incinerated with great care over a spirit lamp, and on cooling a few c.c. of water are added. The crucible is then placed on a boiling water bath and the residue again incinerated as before. The resulting residue, after cooling, is taken up with a boiling solution of sodium chloride (1:500); the particles of carbon are carefully broken up, the solution filtered, and this operation of washing out the crucible with the boiling solution of sodium chloride is repeated until about 200 c.c. of filtrate have been obtained. The latter should be absolutely colourless and liquid. After the addition of 10 c.c. of solution of potassium permanganate (2 per cent.) to the filtrate, it is boiled for ten minutes in an Erlenmeyer flask, whereupon the excess of permanganate is destroyed by the addition, during ebullition, of a few c.c. of alcohol (95 per cent.). After cooling, the liquid is brought to 220 c.c. by the addition of water, and filtered. Thereupon 16 c.c. of pure acetic acid and 1 gram of pure ammonium chloride are added to 200 c.c. of the filtrate and the mixture is boiled for ten minutes to destroy the nitrites. It is then allowed to cool, when it should be completely liquid, and 10 c.c. of pure acetic acid and 1 gram of potassium iodide are added. After standing for five minutes the liquid is titrated with a

$\frac{N}{160}$  solution of sodium thiosulphate, using starch paste (1:100), freshly prepared, as indicator. To detect the fraudulent admixture of an iodine compound, such as iodised albumin, to thyroid gland powder, the authors recommend the following test: 0.5 gram of the substance to be tested is mixed with 1 c.c. of solution of ammonia and 9 c.c. of alcohol (95 per cent.); after standing for fifteen minutes the mixture is filtered and the filtrate evaporated on a water bath. The residue is treated with water, filtered, and a few drops of chloroform and solution of ferric chloride (1:10) are added. The occurrence of a violet coloration indicates the presence of iodine in artificial combination, and no such coloration takes place with normal thyroid gland. The authors found the following amounts of iodine in 100 grams of powdered thyroid glands of various origin (dried at 105°):—

Pig	...	...	...	...	...	0.3048 gram
Ox	...	...	...	...	...	0.4127 "
Sheep	...	...	...	...	...	0.399 "
Horse	...	...	...	...	...	0.290 "

However, they distinctly disclaim advancing these figures as representative of the average content of iodine in the thyroid glands of these animals, as this is influenced by a host of factors, which the authors propose to make the subject of future investigations.

## INDUSTRIAL CHEMISTRY

**Preservation of Milk.**—Investigations undertaken by A. Müller ("Arbeiten aus dem Reichsgesundheits-Amte," Vol. 53, No. 2) with the object of ascertaining a method to keep milk fresh for a prolonged period, showed that this can be accomplished by first destroying the catalyst naturally present in fresh milk, by heating it to 70° for thirty minutes, and, when cool, adding 0.01 to 0.015 per cent. of hydrogen peroxide. Prepared in this way the milk retains its natural taste unimpaired for three to seven days, provided care is taken to exclude the access of air during the cooling stage.

**Zinc Poisoning.**—A sudden outbreak of illness which occurred recently among the inmates of a large institution near London indicates that danger may arise from the use of galvanised iron vessels for cooking purposes ("British Medical Journal," I., 1923, 201). About 400 people were served with stewed apples which had been prepared in galvanised iron "sleps" at tea, and within a few minutes 200 became ill. A chemical examination of the apples showed that they contained 7 grains of zinc to the pound, or the equivalent of 25 grains of hydrated zinc sulphate. The effects of the poisoning soon wore off. The use of galvanised iron vessels for cooking food materials which are commonly acid should, it is suggested, be prohibited.

**Fat Content of Condensed Milk.**—Basing on the results of his comparative investigations, K. Breuer ("Zeitschrift für öffentliche Chemie," No. 21, 1922) recommends the following modification of Ritthausen's method:—2 grams of condensed milk are diluted with about 400 c.c. of water, whereupon 10 c.c. of Fehling's copper solution and 6.5 to 7.5 of a solution of sodium hydroxide containing 10.2 grams of sodium hydroxide in 1,000 c.c. are added. When the precipitate has settled, the liquid should possess a neutral or very faintly acid reaction, but should not have an alkaline reaction. It is then filtered, the precipitate well washed with water and extracted in a Soxhlet apparatus. The ethereal solution is evaporated to dryness, and the fat dried and weighed in the usual way.

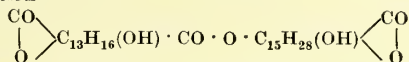
**Preparation of Benzyl Benzoate.**—Principally used in perfumery, as a solvent for artificial musk, benzyl benzoate has recently been recommended as an antispasmodic. It occurs naturally in several essential oils, in tuberose and in Ylang-Ylang, and also in balsam of Tolu and in balsam of Peru. It was first prepared synthetically by Cannizzaro, by the distillation of a mixture of benzyl alcohol and benzoyl chloride. S. Scelba ("Bollettino Chimico Farmaceutico," No. 2, 1923) has studied the question of increasing the yield of this compound, and found that by adopting the following process 70 to 75 per cent. of the theoretical yield of benzyl benzoate could be obtained. A mixture of finely powdered, desiccated sodium benzoate and a slight excess of benzyl chloride is heated on an oil bath at 170° to 175° for about 24 hours, the mass being frequently stirred. The mixture is allowed to cool, whereupon it is first shaken up with water and then sufficient sodium carbonate added to produce an alkaline reaction. The benzyl benzoate, which separates as an oily liquid, is removed by decantation and distilled *in vacuo* to remove the excess of benzyl chloride. After rectification the pure product boils at 196°, at a pressure of 25 mm.

**The Nature of Shellac.**—A preliminary account of an uncompleted work by C. Harries and W. Nagel ("Berichte der deutschen chemischen Gesellschaft," 1922, 55, [B] 3833-3848). An insoluble "pure resin" obtained by treating shellac successively with light petroleum and water to remove colouring matter and then agitating repeatedly with ether is the subject-matter of this investigation, and was found to have all the essential properties of shellac. This resin is treated with N-potassium hydroxide solution at ordinary temperatures and potassium aleuritate is deposited. The filtrate from this reaction is acidified with sulphuric acid and extracted with ether to form a mixture of shellac



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resin acids, which are purified by dissolving in ether and agitating with barium hydroxide solution, and then treating with carbon dioxide precipitating barium carbonate, which absorbs some of the coloured resinous matter. The filtrate contains barium aleuritate and other more freely soluble barium salts of the shellac resin acids in small quantities, but dialysis of this filtrate with a view to isolating a homogeneous material was not very successful, although it showed that the salts are colourless. The use of zinc salts results in a more rapid but less complete purification. The free shellac resin acids do not crystallise readily, and so the best results are obtained by utilising the peculiar fact that these acids are partially esterifiable by methyl-alcoholic hydrogen chloride (3 per cent.) at ordinary temperatures, forming methyl shelloate  $C_{17}H_{24}O_6$  in methyl-alcoholic solution. A boiling solution of N-sodium hydroxide is used to hydrolyse the ester to shelloic acid in colourless leaflets which give the Liebermann cholesterol and the Salkowski-Hesse reactions, and has m.p. 199.5-201°, decomp. 202-203°. The residue when the methyl-shelloate has been separated consists of non-crystalline esters, b.p. 180-210°/0.1 m.m., and apparently consists of compounds of hydroxy-acids, which although themselves amorphous give solid phenylurethanes. The result of the investigation makes it highly improbable that shellac resin is the aleuritic ester of a higher alcohol, for if the latter were an actual constituent it must be present in noticeable quantities; nevertheless, no trace of it was found. As it is shown that the resin does not contain a free acid the probability is that the shellac molecule is made up of hydroxy-acids centred in the form of lactides. The constitution



is suggested for one of the simpler components, which is very similar to that of the "pure resin."

### DENTISTRY

**Arresting Caries in Children.**—Morris ("British Dental Journal," 1923, 279) considers that for filling cavities which cannot be excavated a stiff putty made of zinc oxide and oil of cloves or eugenol is far superior to, and less troublesome to handle, than silver nitrate. The advantages are that no edges need be removed, and it arrests caries and hardens dentine as effectively as nitrate of silver without producing discolouration. It is seemingly waterproof and hardens slowly under saliva.

**Bacterial Origin of Dental Caries.**—The examination of selected carious material shows the constant presence of a definite type of bacilli ("Lancet," I., 1922, 1185) which are capable of forming a high degree of acidity by the fermentation of carbohydrates. Teeth left in contact with cultures over a long period showed changes almost identical with "natural" caries: erosion of the enamel, penetration of the dentinal tubules, and the formation of liquefaction foci. These bacilli in their resistance to and formation of acid resemble the acidophilus group of Moro; biologically, however, there are several points of difference. To the bacilli it is proposed to give the name *B. acidophilus odontolyticus*, Type I. and II.

**Acriflavine Treatment of Abscess Conditions.**—The method adopted by Webb ("British Dental Journal," 1923, 14) in acute cases of alveolar abscess is to open the abscess freely over the apex of the root, evacuating as much pus as possible. The root canal is then cleaned out and enlarged by hand reamers, peroxide of hydrogen being used to remove débris. The apex of the root is opened, and negative pressure exerted by means of an old syringe barrel with needle and nozzle connected up with a vacuum casting apparatus by a thick rubber tube. The hypodermic needle is sealed into the pulp canal with gutta-percha. The pulp canal is then dressed with: Acriflavin., gr. ii.; spt. vini. rect., ʒii.; ol. caryoph., ʒi. Some of the preparation is introduced by capillary

attraction into the pulp canal, which is sealed with a paste of zinc oxide and oil of cloves. The tooth is then left until the following day, when the incision over the apex of the root is probed to make certain of a free passage, the root canal is opened, and a hypodermic syringe of acriflavine 1 in 1,000 forced through the apex in a free stream thrice. This is not a painful operation. The wound is then packed with iodoform gauze, which is removed on the following day, and the wound allowed to heal. All débris is removed; the root canal is thoroughly dried with absorbent paper points, and filled with a paste of:—Acriflavin., ol. caryophili, spt. rect., alum., thymol., iodoform., zinc oxide. This is followed by a solution of gutta-percha in chloroform and a gutta-percha point. The paste is pumped up with a smooth broach, using an in-and-out motion. The chloro-percha solution is introduced in a similar way.

**Tooth Paste and Cavity Formation.**—An investigation as to the influences of alkaline and acid tooth paste upon cavity formation has lately been carried out by Chillingworth ("British Dental Journal," 1922, 1089), who finds, from a series of salivary reactions before and after use of acid dentifrice, that less than half the cases exhibited an increase in alkalinity after using the paste, and that the increases obtained were extremely slight. The oral response to alkaline medication showed that two-thirds of the cases exhibited an increase in alkalinity, whereas in the acid series 53 per cent. of the cases failed to show alkaline increase. Owing to the contrast in pH values in the two series of tests, investigations of the reactions of the cavities in school children, using acid paste medication, were carried out. It is found that approximately 50 per cent. of the children still carried their soft acid filling thirty minutes after its introduction. The alkaline paste in 5 per cent. solution gave a hydrogen index of pH 8.2, while the acid paste used yielded an index of pH 5.3. This degree of acidity is most unfavourable for ptyalin activity, and it is reasonable to believe that ptyalin action will not be favoured by the higher percentage of acid paste which packs the cavities. Hence, it has been reasoned that acid pastes continue to prevent salivary digestion by filling and plugging the cavities in and between the teeth, and that this type of soft filling accentuates and hastens cavity formation. The initial application of the brush carrying the acid paste mechanically and effectively seals fermentable material in the cavity and at the same time supplies such carbohydrate débris with an acid environment, thus defeating the purpose for which it was intended. Alkaline paste will likewise seal fermentable material in the cavity, but the presence of an alkali in the cavity area is most desirable because it will tend to inhibit acid fermentation. The author summarises his conclusions as follows:—(1) Acid stimulation is not followed by marked increase in oral alkalinity; (2) acid paste seals cavities, acting as a soft filling, assuring an acid environment to the cavity; (3) following the use of solid acid food, particles remaining within the mouth should be carefully removed.

### ESSENTIAL OILS

**Oil of Hibiscus Cannabinus.**—A sample of the oil obtained from the seeds of *Hibiscus cannabinus*, Lin., received from Nigeria, was found by J. Dekker ("Pharmaceutisch Weekblad," No. 48, 1922) to possess properties closely resembling those of arachis oil. The seeds contain 7.54 per cent. of moisture and 21.76 per cent. of a light yellow, tasteless, viscid oil, possessing a characteristic odour. Acid value, 1.6; saponification value, 189.2; iodine value, 89.7; specific gravity at 15°, 0.9091.

**Factors of Odorous Strength** are the subject of a letter in "Nature," 1923, 359) by Mr. T. H. Durrans, who is an authority on this subject. This is in reply to a letter by J. N. Kenneth, of the Psychology Department of Edinburgh University, who found a number of persons arrange vials of essential oils (sandalwood, cedar wood,



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origanum, and terebene) in order of smell according to gravity. Mr. Durrans points out that the order of arrangement is likewise that of volatility also, but that volatility alone does not afford a satisfactory explanation of the phenomena of smell. At least four factors are concerned: (1) Volatility; (2) solubility in aqueous layers in the nose; (3) solubility in the lipoid fats of the nose; (4) chemical reaction with osmoceptors of nose. A substance which fails to satisfy any one or more of these is odourless, and it is obvious that variations in the factors will produce variations in both strength and quality of odour.

### MATERIA MEDICA

**Tiliacora Acuminata, Miers.**—A investigation of the bark of this Menispermaceæ indigenous to India, where it is employed as a remedy against snake bite, undertaken by L. van Itallie and A. J. Steenhauer ("Pharmaceutisch Weekblad," No. 51, 1922), revealed the presence of a crystalline alkaloid, tiliacarin, of the formula  $C_{16}H_{27}NO_2(OCH_3)_2$ , a non-crystalline alkaloid, d-querцит, fumaric acid, phytosterin, resin, glucose, and a semi-drying fatty oil.

**Afzelia Africana.**—The seeds of this African Papilionaceæ were studied by A. Diedrichs and B. Schmittmann ("Zeitschrift für Untersuchungen der Nähr- und Genussmittel," Vol. 43, No. 4), who found that the oil present in the kernel differed from that obtained from the arillus. The former is light yellow in colour, viscid and practically odourless; acid value, 4.19. The oil obtained from the arillus is brick red, with an odour resembling that of violets.

**Atropine Ergot.**—In preparing ergotinine from a recent supply of ergot purchased in Paris and stated to be of Portuguese origin, G. Tanret ("Journal de Pharmacie et de Chimie," February 16, 1923) was surprised to find that he was unable to obtain the usual yield of this alkaloid. A closer examination of the material demonstrated the presence of a large number of specimens of a darker colour than is usual and adhering to each other, a feature never found with genuine ergot. On examination these were found to be a gross adulteration, and Tanret assumes that they were prepared from a paste made of flour fashioned in exact imitation of the sclerotium, including the longitudinal furrow, dried, dipped first in red and then in black ink, and again dried.

**Davilla Rugosa.**—This plant is indigenous to Brazil, occurring principally in the States of St. Paul, Minas Geraes, and Rio de Janeiro, where it is known as "cipó de cabodó," or "capa homén." It has for long been extensively used as a popular remedy, the leaves being simply boiled until they become soft, and applied locally as a poultice to inflammatory processes. On account of its excellent properties, a soft extract and a liquid extract prepared from the leaves have been included in the Brazilian *materia medica*. The drug displays a vasoconstrictive action associated with a slightly local anæsthetic effect, which have been found to yield excellent results in the local treatment of hæmorrhoids, and various inflammatory conditions. G. Batta and C. Genot ("Journal de Pharmacie de Belgique," No. 1 and 2, 1923), who undertook a study of this drug, were unable to trace any alkaloids or hydrocyanic acid in the leaves. On incineration the latter yielded about 9 per cent. of ash. The therapeutic action of this drug is apparently chiefly due to its content of tannin, the soft extract prepared by extracting the leaves with boiling water being found to contain no less than 8.75 per cent. of tannin.

### MEDICINE

**Atropine in Migraine.**—For migraine, a writer after eight years' experience states that atropine is almost a specific ("British Medical Journal," I., 1923, 18). The dose is from 1 to 3 minims of liq. atropine thrice daily after meals. Continuous and indefinite administration is

unnecessary. A course of three weeks or more to commence with, followed by 10 to 14 days' treatment at intervals, determined by the reaction of the particular patient, suffices.

**Liquid Paraffin and Cancer.**—It has recently been suggested ("British Medical Journal," II., 1922, 1280) that the taking of liquid paraffin may lead to the development of cancer on the grounds that (1) soot and hydrocarbons produce cancer, and (2) the taking of a mineral substance is a profound departure from the normal. A substitute is suggested in agar-agar which can be cut up into small pieces and stored in a tin. A tablespoonful once or twice a day is said to have excellent effects.

**Prevention and Cure of Scurvy.**—The anti-scorbutic value of South African food substances has been investigated with a view to preventing scurvy among native labourers in the Rand mining compounds ("British Medical Journal," II., 1922, 1276). Oranges were found to have a higher antiscorbutic value than peaches or pineapples. The naval orange was superior to the naartje. Pawpaw was nearly as potent as orange. Sweet potatoes and green mealies are the strongest anti-scorbutics among the common South African vegetables. Kaffir beer has the same anti-scorbutic value as fresh milk. The quantity of anti-scorbutic required to cure scurvy is five times the amount necessary as a preventive.

**Carbolic Acid Absorption through the Skin.**—A case of severe carbolic poisoning by inhalation of the fumes alone has been described ("Lancet," II., 1922, 1,359). A youth employed at a chemist's shop let fall a winchester of carbolic acid, and, within a few minutes of bending down to mop up the fluid, he fell unconscious. Thirty minutes after the accident he was comatose. Only slight burns were noted on the right hand and nothing in the mouth. The breath had a strong odour of carbolic acid, and the mouth and nose were covered with froth. The prognosis looked extremely grave. An intravenous injection of 2 pints of solution with 2 dr. of sodium bicarbonate to the pint was given, and this resulted in definite amelioration of the extreme symptoms in a short time.

**Beta-naphthol and Thymol in Ankylostomiasis.**—If the patients are debilitated and anæmic, before treatment is started a tonic is given containing ferri et ammon citr., liq. arsenicalis, liq. ammon. fort. This is continued in the intervals of treatment. ("Lancet," I., 1923, 371.) Treatment is as follows:—Calomel, 5 grains; sodium bicarb., 10 grs., in the evening, followed in the morning at 7 a.m. by sodium sulphate 3ij. in water 3iij. At 8 a.m. beta-naphthol 3ss., thymol 3ss. mucilage q.s., water to 3j. is given and repeated at 10 a.m. The patient is kept in bed until about 4 p.m. without food or liquid, and after that time they may have fluid diet only for the remainder of the day. A percentage cure of eighty-nine in four treatments has been attained. In some cases other well-known treatments had been tried without effect.

**Stibényl in Kala-azar.**—Experiments have been made with an organic compound of antimony, stibényl (acetylpara-aminophenyl-stibiate) in the treatment of kala-azar, and the results of treatment in 10 cases reported. ("Lancet," I., 1923, 281.) These results are shown to be not very encouraging to those who are seeking a short cut to the treatment of kala-azar. The author concludes that the use of stibényl for the treatment of kala-azar has not been successful in India. Also, that there is some other factor to be taken into consideration than that of the relative toxicity of this organic compound of antimony; and that this probably also applies to other complicated organic compounds of antimony, which should therefore be used with the utmost caution. Further, that the curative effect of an antimony compound is not in direct proportion to its antimony content.

**Influence of Light on Cancer.**—M. Benoit ("Union Pharmaceutique," No. 2, 1923) has established that actinic rays and white light exert a retarding action on



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the development of carcinomatous tumours, while rays with a long wave-length favour their growth. This observation is borne out by statistical data, inasmuch as the mortality from various neoplasms is greater in towns than in the country, where the population is more exposed to the action of the sun's rays. In France, the highest percentage of cases of cancer are to be found in the north and north-east; in sunny countries, such as Spain and Italy, the mortality from cancer is much lower than in foggy and rainy countries, such as Great Britain, Holland, and particularly in the Swiss valleys, where the sun appears late and disappears early. In fact, the mortality from cancer increases progressively from the Tropics to the Northern countries.

**Butyn is a synthetic substitute** for cocaine which was investigated by a committee of the section of ophthalmology of the American Medical Association. A report published ("British Medical Journal," I., 1923, 57), in which the conclusions are summarised as follows: Butyn is more powerful than cocaine, a smaller quantity being required; it acts more quickly; its action is prolonged; it is less toxic in the quantity required; it produces no drying effect on tissues; it produces no change in the size of the pupil; it has no ischaemic effect, and therefore causes no shrinking of tissues; it can be boiled without impairing its anæsthetic efficiency. Butyn is used with satisfactory results in work on the eye, ear, throat and nose, and dentistry, in spinal anæsthesia and genito-urinary anæsthesia. The author of the paper states that if it can be firmly established that butyn possesses the good qualities of cocaine without the bad ones it should be recognised and acted on by surgeons.

**The Dosage of Radium.**—The duration of the application is important in radium treatment ("British Medical Journal," I., 1923, 100), and there is for each case a certain optimum combination of milligrams and hours, which is for experts to decide. Small amounts (it is suggested) of radium for prolonged periods are more likely to prove beneficial than large amounts for short periods. The amount of radium to be put into tubes depends on the nature of the diseased condition to be attacked, its situation, area, volume, and whether the radium is to be applied externally or buried in the growth. In order that the whole of a growth may be efficiently and uniformly radiated, the radium should be, theoretically, uniformly distributed throughout it—like pepper from a pepper pot—though this is, for several reasons, impracticable. Dr. Stevenson's needles are a means to this end (small tubes with radium emanation enclosed in hypodermic needles for embedding in the neoplasm). There is the disadvantage that the dosage is not known unless the tubes have been previously tested; the emanation strength, of course, steadily diminishes. The whole maximum dose should be given at first, so as to prevent the cancer cells from breeding cells which are immune.

**Treatment of Whooping Cough.**—In a recent epidemic lactic acid bacilli preparations (lactol being the best) were used with marked and uniform results ("Lancet," I., 1923, 78). The method is as follows: A few grains were blown up the patient's nostrils with an insufflator four times daily. If used more often, slight epistaxis may be caused. Within 24 hours the puffy appearance disappears from the face, and vomiting, if present, subsided. The whoop disappeared invariably in from two to eight days. An irritating cough, which was sometimes afterwards complained of, was found to be due to the dribbling of mucus from the posterior nares to the back of the pharynx, and the cough ceased when a sleeping posture was adopted that caused the floor of the nasal fossa to incline forward. The prompt effect of the bacillus often may be due to a protein reaction. If treatment can be commenced early, all the severe symptoms can be abolished under a month, as follows ("Lancet," 1923, I., 255): 1. Vapo-cresolene burned at night or, in the most severe cases, all day. 2. Pure benzol by the mouth, min. vi. to the half-ounce for a child of six, with diminish-

ing doses for lesser ages down to one drachm for a child of one year. If the child loses its appetite, syrup. ferri phosph. co. soon restores it. Bromide gr. 1 for each year, may, in the severe cases, be advantageously added to the whooping-cough mixture.

**Colloidal Kaolin in Stasis.**—The treatment of chronic intestinal stasis by means of colloidal kaolin has been suggested ("Lancet," I., 1923, 433) as follows: The dropping of the stomach and large intestine is corrected by a Curtis belt. Stasis in the large intestine is met by prescribing liquid paraffin. If the pelvic colon is much elongated warm saline enemata should be given in addition. Spasm of the sphincters (pyloric and ileo-cæcal) and spasmodic constriction of the large intestine are best overcome by belladonna, 8 or 10 minims of the tincture with a little bicarbonate of soda twice a day after food. Decomposition in the intestines is dealt with most effectively by means of colloidal kaolin, a dessertspoonful of the kaolin powder if taken in half a tumbler of hot water night and morning. The septic contents of the lower ileal coils must be cleared out by salines. The advantages to be derived from colloidal kaolin are:—1. It absorbs bacterial poisons in the intestines, and is a potent and efficient agent in rendering these poisons innocuous. 2. It soothes the mucous membrane. 3. It has a very useful mechanical action in the large intestine. In conjunction with paraffin it converts the faeces into a soft, homogeneous mass, which passes through the big bowel readily. Colloidal kaolin is also indicated in colitis and dysentery and in common ailments not primarily or necessarily due to stasis, in which alimentary toxæmia occurs (bronchitis, pharyngitis and infantile diarrhoea).

**Rhodesian Tests of Bayer "205."**—Three lines of investigation have been followed in Rhodesia in regard to the action of Bayer "205" ("British Medical Journal," I., 1923, 35): What therapeutic effect does the drug have (a) on infected human beings, (b) on infected cattle, and in what measure is it effective as a prophylactic of trypanosome diseases in man and beast? A fourth question to which an answer was sought was: Can an infected fly be sterilised by being fed on an animal given "205"? To this last question the answer appears to be in the negative. It was found that the proportion of infected tsetse flies was small, and even when they were artificially fed on infected animals most of the flies escaped infection. More than 180 monkeys were employed. It was found that 0.25 gm. given by the mouth caused the disappearance of the organisms from the blood in 48 hours. The subcutaneous administration of 0.05 gm. to 0.15 gm. of the drug was considerably more effective than the oral, and it was even more marked in the case of prophylactic treatment. The organisms soon become resistant to the drug if the dose is too small, and therapeutic experiments were less successful with cattle than with monkeys. A detailed report on six cases in man is encouraging; and they recommend subcutaneous or intravenous injections of 1 gm. to 1.5 gm., repeated once or twice at moderate intervals. It is pointed out that this is a big dose, but it is urgently indicated on account of the risk, already referred to, of the organisms losing their susceptibility to the drug when it is given in small doses.

**Emetine Bismuth Iodide in Amebiasis.**—The therapeutic action of emetine bismuth iodide may be considered to have a definite curative effect on amebiasis, although sometimes it may be necessary to carry out two or three courses to effect a cure ("Lancet," II., 1922, 1375). Emetine injections, although palliative, cannot be considered to constitute a cure in this sense. Certain rules should be observed regarding the administration of emetine bismuth iodide: The treatment must be regulated by the tolerance of the patient. It is not necessary to push the drug to tolerance in every case. The patient must be treated in bed; the diet should be light and easily assimilated, and not necessarily confined to milk. The vomiting, if delayed (four hours after taking the drug),



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does not mean that the drug will not be absorbed. Diarrhoea is of favourable import and is typical of the action of this drug. There are, as a rule, three or four fluid diarrhoeic motions a day, resembling the dregs of meat extract. The restriction in diet for a month or so after treatment is important, and the patient should receive advice on this point before discharge. The increase in weight is very striking after a successful course of E.B.I. The form in which the drug is administered is important. If compressed into a hard tablet, or if coated with paraffin, vaseline, resin, keratin or stearin, the drug passes through the intestine unabsorbed. Stearin and salol-coated pills are not so efficacious as the gelatin capsules containing the powder. An emulsion containing 3 gm. of emetine bismuth iodide in half an ounce of paraffin. liq. has been advocated.

**New Trypanocidal Remedies.**—Reports have been made recently on the treatment of human trypanosomiasis by the new drug known as "Bayer 205," and on the action of trypanamide in sleeping sickness. ("British Medical Journal," I., 1923, 149). The composition of the former is unknown, but it is believed to be a dye containing aminonaphthalene-sulphonic acid, with a complex formula. Trypanamide is a pentavalent arsenic compound, and a derivative of atoxyl. Of nine cases of trypanosomiasis treated with Bayer 205, seven recovered and two died. Treatment consisted of intravenous injections of 1 gm. in a 10 per cent. solution of distilled water every week for ten weeks, this being regarded as the standard course, although this number of injections has been exceeded. The limit of tolerance has yet to be discovered. With the recovery of these cases the finer traits of character had returned, the loss of which was such a distressing feature of the disease among Europeans. Out of 300 cases diagnosed as sleeping sickness, 40 were selected for treatment with trypanamide, the action of which was described as superior to atoxyl. A course of eight weekly intravenous injections was given, each injection in a solution made up with boiled rain-water of a concentration of 3 gm. in 10 c.c. Results seemed to indicate that the active trypanolytic constituent found its way into the central nervous system. The maximum tolerated dose should not exceed 4 gm. a week for a full-sized adult, and, if given regularly for about eight weeks it is capable of completely removing the trypanosomes from the cell content of the cerebro spinal fluid of even the most advanced cases.

**Hay Fever.**—Ivor Griffith ("American Journal of Pharmacy," 94, 9, 586) deals with the simplification of diagnosis and treatment of hay fever or pollinosis. Scheppergrell has reduced the principal hay fever pollens (on a natural botanical basis) in four groups: (1) Gramineae (grasses); (2) Ambrosiaceae (ragweeds); (3) Chenopodiaceae (chenopods); (4) Artemesias (wormwoods). The characteristics of hay fever plants being that they are inconspicuous, prolific in number and pollen formation, and wind pollinated. The simplified methods are exemplified by treating a given person sensitive to a grass pollen with the most prolific member of the group (timothy grass). Groups (1) and (2) are the most common offenders. Of pollen extracts, the author prefers "the acetone insoluble pollen of the alkalised aqueous extract of the sifted dried pollen." High protein content is the datum from which the pollen unit is established. For diagnosis a small linear scratch, one-eighth inch long, is made on the forearm (previously sterilised with alcohol and rinsed well with sterile water), avoiding the drawing of blood. One drop of centinormal caustic soda solution is placed on the scarified area, pollen extract dusted on and rubbed in gently but thoroughly. The operation is repeated at 2 in. linear intervals with the other extracts, a control of centinormal soda solution alone being made. Results are recorded within 20 to 30 minutes. A marked positive reaction is in the form of a definite urticarial wheal with surrounding area of erythema. A mild reaction shows very little wheal, but distinct erythema. Prophylactic

treatment should begin four to six weeks before the attack is scheduled, from twelve to twenty injections being given, but the dose must be reduced as the specific pollen appears, as the patient is then also exposed to atmospheric pollen. The injecting solution is made from pollen extract, each c.c. representing about 100 units (calculated from protein content, or 6.25 times nitrogen content). The accepted scheme of dosage provides for a first dose of 12.5 pollen units, increasing to 25 pollen units for a second dose. Doses 3 to 11 increase by 25 units per dose to a maximum of 250 pollen units, at which strength doses 11 to 20 remain. A large percentage of hay fever infection is modified, if not cured, by pollen extract treatment.

### OPTICAL

**Correction of Heterophoria.**—Percival ("British Medical Journal," II., 1922, 1250) states that with ordinary prisms which would relieve all or nearly all the error, he has found that the heterophoria has tended to become less, and lays down the following rules regarding the prescribing of prisms in such cases:—(1) Never correct heterophoria, however great, unless it is attended with symptoms; (2) always let the patient wear trial prismatic corrections in the waiting room at least half an hour, to judge their effect, before ordering spectacles for constant use. For comitant hyperphoria he does not hesitate to order the full correction that will relieve the manifest hyperphoria as revealed by the Maddox rods at a distance. Non-comitant hyperphoria is, he points out, far from uncommon.

**Education in Myope Classes.**—The essence of the myope class is that all print to be read, writing to be done, and illustrations to be seen are on such a large scale as to require only a low visual acuteness and to obviate the necessity for a high degree of convergence (Wright Thomson, "British Medical Journal," II., 1922, 1257). Under such conditions it is easy for a child with visual acuteness 6/60 and J 10 or 12 to take a good place in the class and yet do nothing to the detriment of the eyes. Further, he is free from the stigma of having been at a blind school. His future sphere of usefulness is somewhat limited, but given a moderate amount of will power and intelligence, his prospects are much greater than if dependent on the acquired attributes of the blind.

**Colour Vision.**—During the past eight years statistical surveys of the colour vision of more than 2,000 students have been made at Glasgow University (Houston, "British Medical Journal," 1923, I., 255). Frequency curves representing the variation of the ability to discriminate colour about a mean demonstrate that normal variation covers almost everything as regards women but not as regards men. The colour blind cannot be regarded as an extreme case of normal variation. Trichromasy passes into monochromasy directly and not through dichromasy as an intermediate stage, as the original form of the Young-Helmholtz theory required, and the results of the investigation render untenable the latter theory and also the Hering theory. The final theory, when it comes, will be a photo-chemical one.

### PHOTOGRAPHIC

**Use of Substitution Quinone Compounds.**—Investigations of Lumiere and Seyewetz ("Bulletin de la Société Française de Photographie," 1922, 12, 331) as to the value of quinone compounds for intensification of negatives and toning transparencies and prints show that the properties of benzoquinone and its sulphonic derivative of reducing silver images in the presence of sulphuric acid and of intensifying and toning in the presence of bromide or alkaline chloride is also shared by the halogenated quinones and by toluquinone. Naphthoquinone and anthroquinone do not possess these properties. Toluquinone alone of the derivatives of benzoquinone is of practical use for toning transparencies on



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glass and cinematograph films. The results obtained with benzoquinone, toluquinone and chloroquinone are as follows:—**Intensification**: Benzoquinone gives energetic intensification with reddish-brown image, slightly opaque, but toning to a dark brown with alkalis, sulphites or alkaline bisulphites. Hypo reduces the image and increases its transparency without altering its colour. Toluquinone intensifies in a less degree than benzoquinone, giving a purplish-red image, which is changed to purplish-black by alkalis, sulphites and alkaline bisulphites. Hypo reduces the image without changing its colour. Intensification with chloroquinone is less energetic than with benzoquinone, and yields an opaque image, yellowish-brown in colour. Hypo reduces but does not change the colour. **Toning**: A transparent image of sepia-brown colour is obtained with benzoquinone, the colour with toluquinone being purple, similar to gold-toning, while chloroquinone gives an opaque image of a reddish-brown colour.

**Developing Autochromes in White Light**.—Several advantages of the use of ferrous oxalate as a developer and desensitiser of autochromes are noted by Bäckström ("La Revue Française de Photographie," 1922, 243): (1) The developer is an active desensitiser, and not requiring any addition does not alter the speed of development or character of the image; (2) it does not colour the emulsion of the film; (3) the density of the developed image throughout the whole scale of densities is independent of the density of the adjoining portion. The developer, which should be mixed immediately prior to use, is made by slowly pouring one volume of stock solution B (ferrous sulphate) into four volumes of stock solution A (oxalate), with constant stirring to prevent precipitation.

### Stock Solutions

A			
Neutral potassium oxalate	...	...	225 gm.
Water to	...	...	1,000 c.c.
B			
Concentrated sulphuric acid	...	...	15 drops.
Sulphate of iron	...	...	275 gm.
Water to	...	...	1,000 cc.

After immersing the plate in the developer for one minute development may be carried on in the light from a 32-c.p. lamp, but a weaker source is advocated.

**Blue and Green Tones by Development**.—A developer which gives blue tones by direct development of bromide paper forms the subject of a note by Ermen ("British Journal of Photography," 1923, 70, 47), the formula being as follows:—

Dimethyl paraphenylene diamine	...	...	6 gm.
Sodium sulphite cryst.	...	...	20 gm.
Sodium carbonate cryst.	...	...	20 gm.
Water to	...	...	1,000 c.c.

To 100 c.c. of this developer is added 33 c.c. of a solution of alpha naphthol 14.4 gm., caustic soda 8 gm., water to 1,000 c.c. A normally exposed development paper or lantern slide, when treated with this mixture, will give an indigo-blue image—a mixture of silver and indophenol. The indophenol is so stable that the silver may be removed from the image after fixation, by means of hypo and ferricyanide, or any of the ordinary bleachers followed by hypo, leaving a much brighter image. Ordinary black-and-white prints may be bleached in the usual way as for sulphiding, and, after a thorough washing, redeveloped to a blue. The washing must be very carefully done, as the least trace of the bleaching solution, which is also an oxidiser, will cause the formation of indophenol where it is not desired. In a subsequent note (p. 70) the author states that green tones can be obtained by use of a sulphide solution acidified with hydrochloric acid on the bleached print. The green colour makes its appearance only after several hours, but the process may be hastened by a weak bath of ferricyanide. The stock solution of the dimethyl developer will be found to keep better if the carbonate is left out and the sulphite increased to 30 gm.

**Theory and Practice in Photography**.—Dr. C. E. K. Mees in a summary of recent advances in photographic theory ("Journal of the Franklin Institute," 1923, 1) says the attempts to solve the problems of emulsion making have led to its subdivision into three studies: (a) Grain size (the controlling factor of which will probably be projective area and not diameter of particles); (b) light centres, or nuclei distributed according to laws of chance; (c) "light darts," or the theory of the discrete structure of light. Photographic theory at the moment is an orgy of statistical mathematics and "quantum" hypotheses, and though Dr. Mees is not able "to present a clear and definite creed" from recent work on photographic sensitivity, he presents it in understandable manner, and gives hope of its tangible fruition in the next few years. As a contrast, F. F. Renwick, in a discourse before the American section of the Society of Chemical Industry ("Journal Society Cheml. Industry," 1923, 43 T.), states that photographic emulsion making is still an empirical art. Every emulsion contains grains of a fairly wide range of sensitiveness, and the art of the emulsion maker lies in producing regularly that mixture of grain sizes and sensitiveness which will give the photographic character desired. The practice in making "rapid" emulsions is to run, under carefully controlled conditions, a solution of silver nitrate into a well-stirred solution of potassium or ammonium bromide containing also a small percentage of iodide and of gelatin. During a "ripening" process, which is a time and temperature treatment (usually in the presence of ammonia), the particles of silver salts increase in sensitiveness and in size. More gelatin is added, so that a stiff jelly forms on cooling, and the set emulsion is pressed hydraulically through silver wire gauze or perforated plate into strings or shreds, which are then well washed. After draining, the emulsion is remelted and spread on suitable support, and dried after treatment with a little chrome alum to toughen the gelatin and cause it to adhere firmly to the base. This simple set of operations is by no means an easy one to control. It is interesting to note that Renwick's suggestion in 1921, that the sensitiveness is due to a nucleus of colloidal metallic silver dissolved in silver halide, has been confirmed by the work of Weigert and W. Schöller. The latter show ("Sitzungsberichte der Preussischen Akademie der Wissenschaften," Berlin, 1921, 641) that silver chloride is insensitive to light, but that colloidal metallic silver which is present in very small amounts is an active absorbent of light energy. The rate development of emulsions is largely independent of stirring of developers is the conclusion of S. E. Sheppard and F. A. Elliott in the "Journal of the Franklin Institute," 1923, 211.

### VETERINARY SURGERY

**Vitamins and Stock Fertility**.—It has been found by Evans and Bishop ("Science," 1922, 650) that rats fed on a limited amount of vitamin A, plenty of vitamin B, and no vitamin C, grow and develop normally, but do not reproduce. On the administration of fresh green lettuce leaves to animals of proven sterility fertility was restored. Dried alfalfa leaves appear to possess similar potency. The same effect was produced by excess of butter, but not by cod-liver oil, nor by orange juice. The authors consider that natural food-stuffs contain, apart from the three vitamins, a substance "X," which prevents sterility and which cures the disorder occasioned by a purified dietary.

**Etiology and Treatment of Red Water**.—Wallace ("Veterinary Record," 1923, 101) disputes the tick-borne theory of this disease, as the seasonal incidence is early spring and late autumn, and never appears during the grazing season. He suggests that a dietetic theory should replace the protozoon theory, and, since the disease occurs regularly on certain farms, a fungus or bacterium associated with the turnips should be suspected of having some direct influence in production of the



## *The Progress of Pharmacy and Allied Sciences*

condition. Lack of salt in the food to replace that displayed in the blood by the potassium chloride of a vegetable diet, may also be of importance. A laxative dose of sodium chloride in treacle should be given at the outset, and the animal placed on a laxative, easily digested, nutritious diet, no pains being spared to tempt the appetite. Turnips should be withheld unless boiled, or pared and thoroughly washed. The laxative is followed up by ammonium carbonate and nux vomica in gruel three or four-times daily, combined with sodium chloride to induce thirst, keep up the blood pressure, and flush the system. Liq. ferri perchlor. in combination with liq. arsenicalis is administered in gruel twice daily in the hope of replacing some of the disintegrated hæmoglobin, while 6-oz. doses of whisky three or four times daily are prescribed if the symptoms warrant it. Liq. ammon. acet. does not appear from experience to give equal results to alcohol, nor does spt. æther nit., either alone or in combination.

**Pyorrhœa in the Dog.**—This is one of the many diseases primarily due to lack of use, states Gray ("Veterinary Record," 1923, 168). Animals fed two or three times in twelve hours with cooked, chopped up or pappy food—especially if of a starchy nature—but denied or rarely given tearing or breaking material to use their teeth upon have pyorrhœa to the extent of 100 per cent. Pyorrhœa is frequently associated with a collection of tartar on the teeth, but this may be absent. The animal first shows a narrow red line (a redness much deeper in colour than the normal pinkish tinge of the other portions of the gingival membrane) on the alveolar border at the junction of the gum with the teeth; it often appears very much swollen, especially between the teeth, where it bulges or is prominent; it generally bleeds at the slightest touch, and if a fine probe or spatula be passed between it and the teeth, a pocket or a separation from the neck of the tooth is found. The ulcerative process starts in the periodontal membrane, between the neck of the tooth and the alveolus, and is maintained or kept up by the accumulation of particles of food in the small separation, which subsequently becomes progressively deeper and wider, collecting larger quantities of food and purulent secretion as time goes on, until the tooth becomes loosened or is removed or, not infrequently, is allowed to fall out. In the majority of instances the gum and alveolar processes undergo inflammatory atrophy and recede as the disease progresses down the periodontal membrane, and thus exposes the portion of the rootshaft of the tooth denuded of the periodontal membrane. This uncovered part of the root has a greenish or blackish appearance, with a roughish or uneven surface. In other cases there are no apparent atrophic changes of the gum or alveolus, the tooth on simple inspection appearing to have a normal relationship with the gum. This is very deceptive, for on passing a spatula or probe it will be found that there is a pocket even the depth of an alveolus with complete detachment of the root. Where a tooth has more than one fang or asp, one root may be normally fixed in the alveolus and the other or others separated partially or completely from the alveolar wall. Sometimes the external wall of the alveolus is wanting, thus exposing the whole length of the external face of the tooth root, while the internal wall is normal and adherent to the internal face of the tooth root. The secondary results of this affection are often serious, the most important being a chronic form of septicæmia, which may be accompanied by a gangrenous ulceration of the buccal mucous membrane in contact with the teeth. Next in importance come the frequent attacks or gastritis or gastro-enteritis, occasional sickness or diarrhœa. The only treatment of the disease is its prevention by allowing the dog to use his teeth in a natural manner, but as a mouth wash the author has found dilute hydrochloric acid of value.

**Anæsthesia in Menagerie Patients.**—The anæsthetisation of menagerie patients involves no principles that do not apply equally well with regard to the domesti-

cated animals, states Wooldridge in a paper presented to the Central Veterinary Society recently ("Veterinary Record," 1923, 97). Most of the larger animals have to be driven or coaxed into a very strong box with sliding doors and chloroform vapour pumped in by means of a foot pump, which drives the air either through a sponge or through chloroform in a wash bottle and on into the chamber. When anæsthesia is complete, that portion or limb to be operated on is drawn out and attended to. It is not often necessary, nor is it safe, to withdraw the whole of the animal, in case he revives. Danger to the patient is generally indicated by jerky, irregular respiration, and sometimes by sudden cessation of breathing. In such cases pumping should be stopped and more air admitted, and the animal prodded with a blunt instrument. Ammonia or amyl nitrite should be held to the nose on long forceps. It may be necessary to draw out the patient and drop a few minims of hydrocyanic acid on the lips, a process requiring much vigilance. Animals, such as monkeys, have to be caught in a net on a hoop and stick, the mouth of which is then twisted to prevent the patient escaping. When in this situation the open method is best, using a wire frame, over which muslin is spread and the chloroform dropped on from a drop bottle. In cases that can be taken out of the net or otherwise caught and handled, masks of various sizes are used. For still smaller animals, the bell-jar has been found to be a very excellent instrument, lending itself to easy observation, the chloroform, xxx.-xxx. being introduced on cotton wool. The amount of chloroform necessary varies enormously, as is shown from the data given concerning eighty-six cases, and especially so in the box methods. One bear took 3vi., one 3ivss., and none of them took less than 3iv., and even then none of the bears was properly or completely anæsthetised. A lioness required 3iv., while the amount required for tigers varied from 3ii. to 3iv. A lynx required 3iii., and a black jaguar was well under with 3ii. 3ii. A remarkable variation was observed in tapirs, one being well under with 3iiss., while another required 3viii. The latter beast was very difficult to get under and then suddenly respiration ceased, but was satisfactorily restored. A zebra was well anæsthetised by 3i. in a Cox inhaler. Ether vapour is not recommended, as the period of preliminary excitement is longer and more severe than with chloroform, and the nauseating after-effects last longer. In discussing the paper, Colonel Williams mentioned that a simple and effective method of producing anæsthesia in a camel is by an intravenous injection of chloral hydrate. The dose is one and a half to two ounces dissolved in water and well diluted. The camel is placed in a sitting posture, and while under the influence of the drug it does not fall.

**BUSINESS PROPAGANDA.**—The Federation of the Associations of Pharmacists of Italy recently decided to enlighten the public on the position of the profession in a statement, which is being printed on the wrapping paper used in pharmacies:—"The public does not know the pharmacist and entertains an erroneous opinion concerning him. It readily confuses him with an ordinary tradesman, and does not remember that he is a genuine professional man, graduated from a university the same as the physician, the veterinary surgeon, the advocate, the notary, the engineer, the professors. It reckons up his modest profits in so much per cent., as is done in ordinary business, without thinking that one is compensating the pharmacist for the value of the drugs supplied, in addition to a remuneration, a professional honorarium, for the guarantee of purity of the drugs he supplies, for handling the same and transforming them into medicines, and for checking the amounts in medical prescriptions. The public must learn to recognise in the pharmacist a professional man and not a tradesman. In doing so it will appreciate his functions in the social scale and have a greater respect for him."



## Deaths

**BALMFORTH.**—At his residence, 5 Grosvenor Road, Whalley Range, Manchester, on March 16, Mr. Alfred Balmforth, for forty-five years a representative of James Woolley, Sons & Co., Ltd., manufacturing chemists, aged eighty-three. Mr. Balmforth retired into private life on December 13, 1905.

**CORNISH.**—At Mitcham, recently, Mr. William Cornish, aged eighty-eight. Mr. Cornish was one of the last of the Mitcham lavender growers, and in years gone by a leading figure in the industry. For nearly twenty years he was manager of a lavender and peppermint farm covering some 500 acres, in the neighbourhood of Figgs Marsh. At that time it was owned by Potter & Moore, but it has now passed to other uses. Mr. Cornish was an authority on medicinal plants, which he grew in his "physic garden," and which included belladonna, poppies, henbane, squinting cucumbers, and agrimony. Ten years ago, however, he transformed his "physic garden" into a rose and chrysanthemum garden.

**DEWAR.**—At 21 Albemarle Street, London, W.1, on March 27, Sir James Dewar, F.R.S., M.A., LL.D., D.Sc.,



SIR J. DEWAR, F.R.S.

F.I.C., Fullerian Professor of Chemistry at the Royal Institution, aged eighty. Sir James Dewar was born at Kincardine-on-Forth, and was educated at Dollar Academy and Edinburgh University. At the University he studied chemistry under Lord Playfair, whose principal assistant he became in 1863, after an interval of study with Kekulé at Ghent. In 1877 (when he was Jacksonian Professor at Cambridge) his exceptional research work, especially in the determination of physical constants, secured his election to the Royal Society, and from that time onwards he became widely known in scientific circles, and, eventually, by the general public. His series of discoveries in connection with the properties of gases at low temperatures, to defray the cost of which a special fund was raised, began to be popularised about the beginning of 1893, and the Winter Issue of THE CHEMIST AND DRUGGIST for that year had a two-page article describing a lecture delivered by the Professor at the Royal Institution on January 20. A few years previously, he had invented, in conjunction with Sir Frederick Abel, the smokeless explosive officially adopted under the name of cordite. In 1897 he was elected President of the Chemical Society, after a contest, and this was only one of many distinctions that fell to his lot year by year. In respect of honours of this kind, he was one of the very few rivals of the late Sir William Crookes, who died in 1919. The storage of liquid gas presented a problem overcome by the invention of the vacuum flask, once known as the Dewar flask: Sir James failed to secure the patent rights of this widely-used appliance, but succeeded in safeguarding his interests in respect of a later contrivance, in which charcoal was used as an absorbing agent. His published monographs include contributions to the proceedings of the Royal Societies of London and Edinburgh, and to those of various other learned bodies: so recently as January 19 of this year, he was lecturing to the Royal Institution. Sir James was knighted in 1904, and celebrated his golden wedding in 1921. He is survived by a widow.

**EMMERSON.**—At Swalecliffe, Kent, on January 9, the Rev. George John Emmerson, chemist and druggist, rector of the parish, aged sixty-five.

**GREEN.**—At his residence, West Street, Alford, Lincolnshire, on March 19, Mr. George Green, chemist and druggist, Market Place, aged seventy-two. Mr. Green,

who was a native of Horncastle, had been in business at Alford for more than forty years. He was a prominent member of the Hamilton Lodge of Freemasons, and in his younger days was keenly interested in sport, especially cricket and football. His wife predeceased him some years ago.

**HILL.**—At 1 Liverpool Road, Stoke-on-Trent, on March 26, Mr. Arthur Charles Hill, Ph.C. (Allison & Hill, chemists), aged forty-three. Mr. Hill, who passed the Major examination in 1902, has been in business at Stoke for several years. He leaves a widow.

**HODGE.**—At 45 South Tay Street, Dundee, on March 26, Mr. John Hodge, chemist and druggist. Mr. Hodge, who passed the Modified examination in 1889, had been in business in Dundee for a long period, and his shop was a well-known landmark. He sold his business last November on account of ill health, but release from the responsibilities of a pharmacy failed to effect any permanent improvement in his condition. A widow survives him.

**LOWE.**—At Glossop, on March 18, Mr. Arthur Lowe, chemist and druggist, aged sixty-six. Mr. Lowe was for many years manager of the Glossop branch of Boots, Ltd.

**RAINE.**—At West Hartlepool, on March 23, suddenly, Mr. Ernest A. Raine, for some time Northern representative of Cuxson, Gerrard & Co., Ltd., manufacturing chemists, Oldbury, Birmingham.

**SAMUELSON.**—At 6 Kensington Court Mansions, W., on March 19, the wife of Mr. Percy Samuelson (P. Samuelson & Co., 27 Mincing Lane, London, E.C.3.).

**WINGFIELD.**—At 9 Ilderton Road, London, S.E.16, on March 17, Mr. Thomas Arthur Wingfield, chemist and druggist, aged forty-six.

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## Personalities

Mr. J. S. SHEARMAN, chemist and druggist, Haverhill, has been elected President of the local traders' association.

PLAYING in a four-ball golfing match at Hendon on March 22, Mr. Edward Beaton, chemist and druggist, England's Lane, London, N.W.3, holed out from the seventeenth tee.

MR. F. S. HANKINSON, managing director of F. S. Hankinson's Pharmacy, Ltd., has been appointed the managing director for Sloneck & Co., manufacturers of essential oils, 18 Southwark Street, London Bridge, London, S.E.1.

MR. WILLIAM GLAISTER, chemist and druggist, has been granted permission to practise as a chemist and druggist in the Island of Jersey. Mr. Glaister will be closely associated with Messrs. D. C. Black, T. A. Morguard and P. D. Le Broca in the Piquet's Pharmacy's interest.

SIR ALMERIC FITZROY, K.C.B., K.C.V.O., has asked, for reasons of age, to be allowed to resign the office of Clerk of the Privy Council, which he has held since 1898. On Sir Almeric's retirement, which will take effect on May 31, the duties of the office will be combined with those of the Secretaryship to the Cabinet and to the Committee of Imperial Defence, and Lieutenant-Colonel Sir Maurice Hankey, G.C.B., will become Clerk of the Privy Council without additional remuneration.

In London, on March 20, Mr. Percy Barrs, F.C.S., manufacturing and dispensing chemist, 106 Church Street, Kensington, W.8, was installed as Worshipful Master of the Earl Roberts Lodge, No. 3151. Among the brethren who sat down at the banqueting table, the following interested in pharmacy were present: Dr. Fenton (medical officer of health for Kensington), Dr. Spencer Cox, Mr. W. M. Cooper, Ph.C. (National Hospital), Mr. F. B. Arnold (managing director, S. F. Goss, Ltd.), Mr. J. M. Powell, chemist and dentist, Reading, Mr. E. D. Proudlock and Mr. J. W. Royle (John Royle, Ltd.), and Mr. C. H. Maile. The Bow Bells concert party provided an excellent musical programme.



## Trade Notes

**MACSON'S, LTD.**, manufacturing chemists, Blyth, near Newcastle, make an offer of special lines in packed goods, of which samples will be sent on request.

**CORN SILK ENVELOPES** in a great variety are produced by Thomas Waide & Sons, Ltd., Leeds. Miniature reproductions of the envelopes are given in an advertisement in this number.

**PYORRHOCIDE TOOTH POWDER.**—The American Drug Supply Co., Ltd., 40-42 Lexington Street, London, W.1, announce a reduction in the retail price of Pyorrhocide tooth powder to 5s.

**PLASTER PRICES REDUCED.**—Edward Taylor, Ltd., Salford, and 21 Ely Place, London, E.C.1, announce price reductions in several varieties of plasters. A new price list is now ready.

**WEST INDIAN TAMARINDS.**—The new season's tamarinds are now arriving in this country. Wholesale buyers should write for quotations to Tucker & Cross, 15 St. Mary Axe, London, E.C.3.

**EAST INDIAN CORIANDER OIL.**—The first important consignment of East Indian coriander oil has just been received by Mr. K. S. Mavlinkar, Beauchamp Street, London, W., and will be offered at competitive rates to the trade.

**NOVOCHIMOSIN.**—Chas. L. Huisking, Ltd., 74 Great Tower Street, London, E.C.3, agents for the Industria Chimica, Lugano, give particulars of Novochimosin, described as a new bactericide enzyme. The remedy is for dyspepsia, and is issued in tablet form.

**FRUITIE SULPHUR TABLETS.**—Chrystoid (Chemists), Ltd., manufacturing chemists, Bootle, advertise in this issue "Fruitie" sulphur tablets, the feature of which is that the tablets are flavoured with either raspberry or lime fruit. Cartons are supplied with the tablets, and neat showcards are obtainable.

**EASTER HOLIDAYS.**—In addition to the announcement regarding Easter holidays in last week's issue of the *C. & D.*, the following wholesale houses inform us that they will be closed from Thursday evening, March 29, until Tuesday morning, April 3:—Goodall, Backhouse & Co., Leeds; R. W. Greeff & Co., Ltd., Thames House, Queen Street Place, London, E.C.4.

**SULPHUR TABLETS.**—Ayrton, Saunders & Co., Ltd., Liverpool, send out a folding showcard for use in the window or on the counter, to advertise sulphur tablets. The centre-piece is a representation in colour of a volcano, to the flames of which sulphur tablets are affixed. The side-pieces of the show-card explain the need for and functions of sulphur tablets.

**SPARKLETS SEASON.**—In an advertisement in this issue Sparklets, Ltd., Edmonton, London, N., announce a reduction in the retail price of Sparklet syphons to 10s. 6d., with a trade profit of 33 per cent. The syphons are now packed in a three-colour carton and new season's show-cards are offered to chemists. An interesting feature is the guarantee against the risk of unsold syphons at the end of the summer.

**CUTEX COMPETITION.**—Miss H. Brown, Bournemouth, the winner of the first prize in the Cutex "beautiful hands" competition organised by Henry C. Quelch & Co., 4 and 5 Ludgate Square, London, E.C.4, in conjunction with the proprietors of Cutex, was presented with her cheque for £100 at Messrs. Quelch's showrooms on March 23. The presentation was made by Mr. Halk, Vice-President of Northam Warren, who made a brief and appropriate speech. Mr. Henry Quelch explained that the proprietors, in view of the remarkable interest shown in this competition, had awarded no fewer than 300 Cutex manicure sets as consolation prizes, and added that the difficulty of judging the best fifty or so of the photographs submitted was unusually great. Our representative was shown the hands, beautifully photographed, of the first six prize-winners, and it was obvious from these that the final selection was no enviable task. Two mere men had the temerity to show their hands, and this may possibly be a prophetic omen. Further details will be found in Messrs. Quelch's advertisement in this issue.

## Westminster Wisdom

By the "C. and D." Parliamentary Representative

### PHARMACY BILL.

This Bill to place unqualified drug-store proprietors on the Register of Chemists and Druggists without examination was down for second reading on March 26. It was not reached, and this stage was deferred until April 10. The "British Medical Journal," referring to this Bill, states:—

It is worthy of note that, while this measure closely affects the British Medical Association, which is to be represented on the proposed central council, the Association was not consulted prior to the publication of the Bill two sessions ago and has not subsequently been asked for its support. It is safe to assume that the Pharmaceutical Society and the Institute of Chemistry are in a similar position, and it is unlikely that an appreciable amount of support will be found in any quarter for a measure the justification of which lies rather in private interest than in public policy.

### MORPHINE AND HEROIN

Captain J. Hay asked the Home Secretary, on March 22, the amount of morphia and heroin manufactured in Great Britain in 1921 and the amount exported; and what became of the balance remaining in the country.

Mr. Bridgeman replied that the figures, according to the returns furnished to the Home Office, are:—

Morphine manufactured, 147,790 ozs.; exported, 77,364 ozs.

Heroin manufactured, 12,385 ozs.; exported, 14,107 ozs.

To obtain the balance remaining and used in the country during the year, the stocks in hand at the beginning of the year would have to be added to the amount manufactured; and we have no figures to show these amounts, but, apart from any supplies obtained illicitly in contravention of the Dangerous Drugs Act, the balance would be disposed of for medical and scientific purposes through the wholesale or retail dealers licensed or authorised under the Act.

### SPÄHLINGER TUBERCULOSIS TREATMENT.

The Minister of Health (Mr. Chamberlain), in reply to a question in the House of Commons on March 21, said that all the evidence available as to the value of the Spahlinger tuberculosis treatment has been investigated by the Ministry of Health, and one of the medical officers of the Ministry visited Geneva last year, and, through the courtesy of M. Spahlinger, was enabled to examine certain cases of tuberculosis which had been treated by this method. The conclusions arrived at were that although it is not yet possible to express an opinion upon the scientific value of M. Spahlinger's work from the bacteriological standpoint, the clinical results already obtained fully warrant further investigation as soon as a supply of the complete serum and vaccine is available. It is understood that no definite date can yet be fixed by M. Spahlinger for the production of a further supply, even for the purposes of scientific investigation. He (Mr. Chamberlain) is most anxious to encourage further trial of the remedies in this country under expert observation so soon as a supply is available.

## Information Department

### INFORMATION WANTED

E/153. A.C.D. composition stoppers	M/273. Perkeo wine
M/243. "Comet" perfume, probably French (London supply)	F/23. "Twenty Fragrances"
B/203. Endoin ointment	B/193. Velenate crêpe bandages
E/203. Huxtable's cod-liver oil	H/273. Vigny's "Golliwog" perfumes (London supply)
M/213. Jung's arch braces.	M/213. Wizard arch support
F/23. "Kishori" perfume	

### INFORMATION SUPPLIED

Coty's perfumes. W/231	Moller's cod-liver oil. L/223
Glazed ointment jars. H/173	Roger's Violet-Ray apparatus. H/203
Houbigant's perfumes. W/213	Tripinate bath salts. C/263
Ludigol. R/223	"Zarobee" poudre de riz. S/173
Machines for making cardboard cartons. B/83	Pneumosan. A/213
Magnetic dry cloth cleaner. E/263	



## Observations and Reflections

By Xrayser II.

### "Reasonably Sufficient Steps"

is, as you note, in your remarks on "dangerous" drugs legislation (*C. & D.*, March 24, p. 406), a phrase susceptible of very liberal applications, and he would be a lucky man who escaped conviction under it while the "wisdom in the wig" remains what it is. There is no question about "sufficient"; nothing is sufficient that does not suffice; but who shall say what "reasonably" implies? The one fact that would impress the judicial mind would be the insufficiency of the steps taken; their reasonableness would be judged by the fact of their insufficiency. We have only to refer to the Loughborough poisoning case reported three weeks ago for an instance of the way in which the judicial mind works. A man poisons himself with carbolic acid, obtained ostensibly for disinfecting purposes. There is no question of a breach of the law on the chemist's part, but the man is dead, and he had been sold an 8-oz. bottle of the acid. Someone must be blamed, and who but the seller? He is therefore censured for not having sufficiently observed the purchaser before selling him such a large quantity. As if any quantity sufficient for disinfecting purposes would not have served the suicide's purpose equally well! This kind of "reasonable" judgment of our actions is bad enough when it carries no penalty with it; but under the Dangerous Drugs Act, with its savage punishments, it would be intolerable.

### Mr. Jenkin's Admirable Letter

provides a sufficient defence before any "reasonable" tribunal in any case of alleged minor inaccuracies such as are virtually unavoidable in dispensing. They would not amount to anything like the 10 per cent. deficiency or excess of which Mr. Jenkin speaks, and the defence would cover any error that is at all likely to occur. A mental note of Mr. Jenkin's various points should be made by all pharmacists, as nobody is in these days safe from prosecution.

### Mr. Neathercoat

was not very happy in some of his phrases in addressing the Manchester Association. He said the object of the "branch" movement was to "rope in" everybody connected with pharmacy, which is distinctly suggestive of compulsion. He spoke, too, as if existing associations had not given every pharmacist an "opportunity" of joining them, and that this would be furnished by the branches. The fact is that the opportunity will be just what it was and no more. New brooms sweep clean, and the new branches may be a little more active at first than the associations have been, but in many cases at any rate they will be active at the expense of the associations. The President gave forth a somewhat uncertain sound with regard to the "recent Press campaign." He seemed to advise that we should drop the subject. Well, let *Messieurs les assassins* set the example. While they continue to give publicity to every trumpety complaint and to comment on every prosecution in a sense injurious to the whole craft, we must defend ourselves. In so doing we are "defending the qualification" as efficiently as "headquarters" has ever done it.

### The Perthshire Pharmacists' Association

shows a genuinely Scottish sensitiveness to interference from without, and to some extent I sympathise with its resentment both of the Pharmaceutical Society's action with regard to local branches and of the Retail Pharmacists' Union's advertising propaganda. But so far as the former is concerned I do not see that they have any more ground of complaint than we Southrons. The Society has shown scant consideration for local feeling here, and it does not appear that their methods further North have been materially different from those with which we are familiar nearer home. The chief difference between the Scottish associations and ours seems to be

that with them local patriotism is stronger than with us, which is to their credit. Turning to the R.P.U. manifesto, I am not very greatly enamoured of that document, which I should have liked better had it taken the form of a letter to the papers in which the attacks upon us appeared; but nobody is obliged to stick it in his window (in my district nobody has done so), and in some neighbourhoods it may be useful. We are told that conditions are so different in Scotland that it is useless there, which may be true, though one hardly sees what the statement means. The curious thing about the Perthshire protest is that the manifesto seems to have been resented mainly because nobody but the Pharmaceutical Society ought to take action in such a matter. If there is any general feeling of this kind one would like to know the reason why, and what the feeling portends. Surely it is not a case of Short versus Codlin? My own feeling with respect to propaganda, other than what is involved in fighting particular cases of complaint, is that it is best done quietly over the counter in familiar talk, fortified by such a dispassionate statement of our position as the pamphlet sketched in last week's *C. & D.*, when there is evident need of it and a likelihood that it will be sympathetically received.

### The Proprietors of Glaxo

have wobbled strangely in their attitude towards price protection, and it is difficult to imagine a more humiliating confession of failure than is made in their latest circular on the subject. One can hardly call it a surrender to the Proprietary Articles Trade Association, for it is not clear whether they propose to seek readmission to the Association or not, but a surrender to the originator and guiding spirit of the P.A.T.A. it certainly is; they are taking their present policy from him, and whether it prove right or wrong he must be held primarily responsible for it. I have already criticised his address to the Grocers' Federation somewhat unfavourably, and may say further that it seems to me rather late in the day to object to any scheme of price protection because it is "artificial." Every scheme of the kind that has been tried here or elsewhere is artificial, and necessarily so, since it interferes arbitrarily with what may be called the natural law of supply and demand. The mere fact, admitted by Sir William, that it cannot be applied to goods that may be bought in the open market shows that our P.A.T.A. is an artificial arrangement, a "machine," as Sir William Glyu-Jones himself calls it, and there is something like a straining at gnats after swallowing a camel in his talk about setting up an artificial barrier between our trade and that of the grocer. We do not need to draw any line there; it has been drawn for us by circumstances and by Act of Parliament; and though it is persistently transgressed from both sides it is disquieting to find it ignored by the secretary of the Pharmaceutical Society. I have the greatest possible respect for grocers, and I cannot accuse myself of snobbery in my attitude towards trade in general; but there is a very real distinction between a pharmacist and a grocer, though Sir William cannot define it. This, however, is a little off the point. As to the Glaxo fiasco

### I am not Surprised

that you have had a good many criticisms from correspondents. The feeling that they have to some extent been let down by the manufacturers is natural enough, especially in those who have lent their windows to a display under promises that cannot be kept. And with every allowance for the undoubted difficulties of the situation, the makers cannot be acquitted of having acted hastily and without due consideration. May a word of advice be offered to them by one who is perfectly disinterested in the matter? It is that they should spare no pains, even at the risk of some expense to themselves, to carry out the promise implied in the last paragraphs of the circular you reproduced last week. Their late attempt has raised hopes that were perhaps unreasonable, and which I, for one, always thought likely to prove fallacious.



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## Editorial Articles

### Testing Dispensing I.

THE present series of prosecutions under the Sale of Food and Drugs Acts for alleged inaccurate dispensing is not the first of its kind, but it differs from the previous efforts in having been undertaken by local authorities at the suggestion of the Ministry of Health. Hitherto analysts have conducted such inquiries so as to impress the local authorities employing them, or have suggested that the accuracy of dispensed medicines should be tested. Now we have a Government Department which ought to know that dispensing cannot be carried out with absolute accuracy as a commercial transaction, taking the rôle previously played by analysts. Guidance should have been given to local authorities whose officials are often incapable of appreciating the position. Some of the cases in which summons have been issued and afterwards withdrawn in the London district have been judged on a standard impossible to attain. In 1876, soon after the



Sale of Food and Drugs Act, 1875, came into force, Mr. A. H. Allen, the Sheffield borough analyst, organised what was probably the first dispensing sampling raid. A series of prescriptions were written and taken to chemists shops to be dispensed. The prescriptions contained one of three drugs: (1) Potassium iodide, (2) quinine sulphate, or (3) spirit of nitrous ether. As with the recent Islington cases, steps were taken to bring the results to the attention of the daily Press, which is notoriously incapable of forming a correct judgment on technical and scientific subjects, with the consequence that the honesty of chemists was unfairly impugned. The cases did not come into Court, as there was apparently a doubt whether the Sale of Food and Drugs Act covered the case of drugs compounded extemporaneously. Later in the same year Mr. William Thomson, of Manchester, analysed nearly 200 mixtures dispensed by chemists in Great Britain, and reported the result in a paper before the Manchester Philosophical Society. The prescriptions were mainly simple solutions of (1) potassium iodide, (2) zinc sulphate, (3) silver nitrate, or (4) iron and quinine citrate. As was to be expected absolute accuracy was not attained in all cases, but it is interesting to note the following remarks of Mr. Thomson on the limits of accuracy:—

We as analysts can weigh easily the one-hundredth part of a grain, and I know that balances used by dispensers for weighing such quantities as 120 grains are capable of turning with the tenth part of a grain if kept in good condition, and it would therefore be absurd for anyone to contend that it is impracticable to weigh drugs within half a grain.

As in those days there were no official standards for chemicals it is easy to see that the analysts' results were untrustworthy. For instance, it was probably pure guesswork that several chemists were stated to have used the exact amount of potassium iodide ordered in the prescription. Potassium iodide, which at the present time is of 99 per cent. purity, was less pure fifty years ago, with the result that the large number of chemists who were reported as having varied the amount by five grains, had probably correctly dispensed the prescription. Mr. Thomson's analytical results were unsupported by check samples and are mainly interesting as early instances of testing dispensing. It is worth placing on record the editorial remark we made at the time that "no man living could dispense a mixture in which a resolute analyst could not discern some imperfections." Nine years afterwards the Chelsea analyst submitted a report dealing with dispensed medicine. In the case of thirty prescriptions dispensed by chemists only two cases showed considerable variation from the amount of the drugs ordered which in this case were one of the following:— (1) Mercury perchloride, (2) iron and ammonia citrate, (3) iron sulphate, (4) mercury with chalk, (5) liquor plumbi, and (6) Epsom salts. The report concludes with the opinion that some amendment of the Sale of Food and Drugs Act was needed so that the public could be protected against inaccurate dispensing. It should be noted also that the analyst fixed 10 per cent. as the limit of accuracy, and although the analyses seem to have been conducted in a fair manner, the details of the methods are not given, so that it is impossible to check the results. In 1899 the Fulham authorities sampled the accuracy of the dispensing of thirty chemists with a prescription for potassium iodide  $\text{℥ss}$ . in water  $\text{℥vi}$ . Four chemists were stated to have dispensed the prescription inaccurately and were summoned under the Sale of Food and Drugs Act. One of these cases was heard in court, and Dr. John Attfield for the defence called attention to the fact that excess of potassium iodide which the analyst certified

might have been due to the analyst not having allowed for the impurity which the British Pharmacopœia permitted to be present, or may have been caused by a miscalculation of the contents of the bottle. It is interesting to observe that the summons was withdrawn, the magistrate remarking that he had the greatest doubt as to whether the Sale of Food and Drugs Act was meant to apply to such cases. The Act, he said, was intended to deal with frauds and had no relation to trifling excess of an ingredient in a bottle of medicine. "No reasonable person," he said, "would try and twist the Act round to enforce absolute exactness in a prescription." We hope to deal with other aspects of dispensing testing in a subsequent article.

### Trade Expansion in Oilseeds

INDICATIONS that the oilseed industry has been sharing to a fairly liberal extent in the revival of activity in general trade within the last few months, have been confirmed by the striking official figures of imports into the United Kingdom for the first two months of the year. The increase for February was particularly marked, the total for that month being exceptionally high at 165,850 tons, against 114,716 tons for the same month last year. Taking the two months together, this country's imports represent 300,805 tons, which denotes an excess of close on 100,000 tons compared with the corresponding period of last year. Very striking increases were shown in cottonseed, soya beans, and nuts and kernels, although the receipts of linseed fell notably short of the supplies accounted for in the first two months of either of the two previous years. The imports of linseed, nevertheless, disclose an important amelioration from the comparatively small returns for December last, when crushers were largely dependent on Indian resources in the absence of any notable contributions from the Argentine. The scarcity of Argentine seed made itself acutely felt with the turn of the year and mill operations were badly handicapped, but there has been ample relief during recent weeks. While cottonseed supplies already experienced a substantial recovery of over 100,000 tons during 1922, compared with 1921, with the total for last year at over 483,000 tons, the fact deserves notice that this seed was imported at a much greater rate during January-February this year, the figures representing about 675,000 tons per annum. Soya beans, too, have been diverted to this country in much larger quantities than since the outbreak of the war, although, owing to keen Japanese competition, it is very doubtful whether this trade will be fully restored to what it was prior to the war. The recovery in the trade for nuts and kernels, including copra, has proved wonderfully rapid since the close of last year, for which the total imports had sunk to 365,000 tons, a decrease of 30,000 tons and 102,000 tons respectively against the two previous years. This year's recovery so far is emphasised by the receipts, which for the first two months represent no less than 86,996 tons, which is 35,000 tons in excess of the same months last year, and also well ahead of the high figures two years previous. There has certainly been plenty of indication of a full return of activity in this section, and it is satisfactory to find that only a comparatively small portion of our imports of nuts and kernels is being re-exported to foreign countries, and that therefore the bulk of the resources secured by this country, chiefly from British Possessions, is being utilised by home manufacturers. This also applies to coconut oil,



although in the case of palm oil a large part of the imports is being re-exported to the Continent. The home receipts of the chief oilseeds alone for January-February were, cottonseed 112,733 tons and linseed 46,833 tons, these figures going against 81,342 tons and 53,994 tons respectively for the same months in 1922. Of the total of cottonseed, no less than 82,355 tons came from Egypt, this showing an excess of 27,300 tons compared with the corresponding returns for last year. Of the aggregate of linseed, the River Plate contributed 21,425 tons and India 19,732 tons. Home crushers' operations have been on a much larger scale lately, and ample resources of seed being assured this season, together with an enlarged and more regular outlet for the oil products, a fairly optimistic feeling exists as to the future of the seed-oil industry, despite the fact that current prices are still comparatively high. This is contrary to anticipations entertained at the opening of the season, when under the prospects of increased supplies of seed coming into sight it was thought prices would gradually shape towards a less onerous level. There have been cross-currents, however, in linseed which have upset market calculations. To begin with, the world's stocks of seed and oil in the early part of this year had shrunk to much smaller dimensions than was actually realised at that time, so that the mere fact that these stocks had to be replenished tended to counteract the feeling of weakness which became manifest at one period on the "record" estimates of the Argentine crop and when India was still shipping fair tonnages. Later it is true that the shortage of Argentine seed was made good, and that much larger quantities became available at the River Plate ports, but then shipments from India fell to insignificant dimensions, and thus enabled Argentine shippers to dictate their own terms. The cost of linseed, although at below the highest paid recently, is not much under what it was when spot seed was difficult to get at the close of last year. The belated new La Plata crop met with a very keen demand, not only on European but also on American account, which resulted in exceedingly heavy shipments. The total quantities despatched from that quarter to March 10 was roughly 350,000 tons, of which quite 120,000 tons went to the United States and 230,000 tons was about equally divided between Continental and home ports. The total given above was about 200,000 tons in excess of the quantities that were accounted for in the same period of 1922. The revival of buying on home account was encouraged by the resumption of important purchases by America of linseed oil from Hull, of which considerable quantities will doubtless be shown in future export returns. America has therefore proved an important supporting factor both in seed and the oil product, in spite of her highly protective tariff, the enforcement of which was destined to assist domestic growers and crushers. Home crushers, at any rate, are assured of a fairly heavy American outlet for their product for the next few months at least, and this will help in maintaining its value at a higher level than had been generally expected some time ago. Curiously enough, the heavy increase in cottonseed supplies has failed to make any impression on the market, the cost of Egyptian seed being rather higher than early this year, while the price of Egyptian crude oil at about £39 per ton shows an advance of £2 since January 1. This is attributed to the much better outlet, including the increasing takings on Continental account.

### Business Propaganda

THE proposal (*C. & D.*, March 17, p. 374) to issue a pamphlet for propaganda purposes dealing with the business of a chemist and druggist has been well received by our readers. A large number of suggestions have been received for improving the pamphlet. These are being carefully considered, and those which conform with the scheme as originally devised will be adopted. Further progress with the scheme will be announced so soon as the printing contract has been settled.

### An Income-tax Anachronism

A CORRESPONDENT writes in reference to a reply given in the *C. & D.*, March 10, p. 356, and states that under the Finance Act the wages of a wife in the circumstances referred to can properly be regarded as a trade expense, and deducted in the return for income-tax. At the same time he favours us with some instances in which such expenses have been allowed by the tax authorities, and these we are very pleased to note. But we can find nothing to interfere with our view that the reply to the query is an accurate statement of the law, whatever may be the practice in particular cases. The Finance Act referred to by our correspondent is, we take it, the Act of 1920, which, by Section 18 (2), provides that if the total income of a claimant includes some earned income of his wife the deduction to be allowed for income-tax purposes under the section shall be increased by an amount equal to nine-tenths of the amount of that earned income, but not exceeding in any case £45. This, if it applied, would of course conclude the question of whether the money paid to the wife for her service in her husband's business is a payment which can be looked upon as a trade expense. We certainly agree that in fairness it ought to be; but taking the letter of the law as it stands, we would expect that great difficulty would be found in persuading our Courts that the money paid to the wife was not a sum paid rather by way of domestic expense or an expense of maintenance of the family of the trader, and was not in the sense of the income-tax Acts a trade expense. But while we do hold this opinion, we see no reason why the allowance should not be pressed for in any case in which it is likely to be conceded, as in the discretion of the authorities it may be. The distinction made between a wife and a child in this matter of allowing for payments made for services rendered in the business of the husband or father has nothing in reason to recommend it.

### Business Changes

MR. J. M. CAMERON, chemist and druggist, has opened a pharmacy at Great Square, Braintree.

MR. CHARLES TINDALE, chemist and druggist, 78 Baxter Gate, Whitby, has opened a photographic dépôt at 51 Flowergate.

CHAS. PAGE & Co., LTD., chemical merchants, 47-51 King William Street, London, E.C.4, are removing, on April 3, to 37-39 King William Street.

THOMAS GUEST & Co., LTD., lozenge manufacturers, Manchester, are shortly opening a London dépôt at 1 Swan Street, Minories, E.C.1, where a full range of lozenges, pastilles, compressed tablets, salines and citrates will be held.

THE OCEANIC TRANSPORT Co., St. Dunstan's Buildings, St. Dunstan's Hill, London, E.C.3, have taken over the agency business in this country of the Warsaw Company for Transport and Navigation, Ltd., 35 Nowy-Swiat, Warsaw. Mr. R. T. Chapman, who was formerly the manager of the London and Liverpool offices of the Warsaw Company, is a partner in the Oceanic Transport Co., and the transportation department is under his personal supervision.

BRITISH ASSOCIATION OF DISPLAY MEN.—The headquarters of the British Association of Display Men has been transferred to 43 Blandford Street, London, W.1.



## "Inaccurate" Dispensing

By Ernest J. Parry, B.Sc., F.I.C.

It is quite obvious to any careful observer that the dispensing by British pharmacists is, on the whole, exceedingly accurate. Mistakes must occur here, as in every other walk in life, but the combination of a sensational Press with an unbusinesslike official mentality would suggest that the pharmacist is a cheat, an incapable, and a new source of "persecution." There is, of course, a limit of accuracy in dispensing with which the official mind appears to be unacquainted. The reasons for this are too obvious to require discussion. It therefore becomes necessary for the pharmacist to defend himself against this grossly unfair attack, and I would suggest that in defending those cases where fair and reasonable accuracy has been attained, as is usually the case, the following points should be carefully considered in conducting the defence.

It is common knowledge that in these "trap" prescriptions one or two easily determinable ingredients, such as potassium bromide, are included, with one or more ingredients, such as tincture of nux vomica, which take a good deal of time and skill to determine. In every case with which I have been concerned the public analyst has contented himself with estimating the easily determinable ingredient, and has not determined the ingredient requiring more than his "half-guinea" worth of work. The result of this is that the certificate does not, and cannot, state, within the meaning of the Act, that the sample was composed of the "parts as under," and objection should be taken to the analyst's certificate as not being in accordance with the statute.

Further, any prosecution under Section 6 must show that the sale was "to the prejudice of the purchaser." No defence, so far as I am aware, has raised either of the following points: First, considering that the British Pharmacopœia allows such a wide limit of dosage as, for example, 5 to 20 grains, as it often does, is a prescription calling for 10 grains and actually containing, say, 10.8 grains, in the least degree prejudicial to the purchaser? The prosecution's answer is obvious, but is so trivial that there should be no difficulty in meeting it with proper evidence. It is also true that in many cases the divisions in a bottle are such that rather more or rather less water is added than the trap prescription indicates. There, again, the highly intellectual public analyst's report is against the pharmacist. But so long as the patient gets his dose, be it in a little less or a little more water, no sane tribunal with the facts properly presented to them could say that this type of so-called inaccuracy was "to the prejudice of the purchaser."

The question of protection by disclosure is one of very great difficulty, and is one which, in my opinion, would hardly help the pharmacist. It is a question, so to speak, of contracting oneself out of the Act. Section 8 of the Sale of Food and Drugs Act, 1875, says:—

Provided that no person shall be guilty of any such offence as aforesaid in respect of the sale of an article of food or a drug mixed with any matter or ingredient not injurious to health, and not intended fraudulently to increase its bulk, weight or measure . . . if at the time of delivery of such article or drug he shall supply to the person selling the same a notice by a label distinctly and legibly written or printed on or with the article or drug to the effect that the same is mixed.

This section is obviously intended to deal with intentional mixtures and appropriate disclosures. I do not believe that the Courts would adopt it to cover mistakes, and, even if so, as if the word "mixed" could be dragged in as a defence, the prosecution would very soon turn to Section 4 and rely on the words, "Mix . . . any drug with an ingredient or material so as to affect injuriously the quality or potency of such drug." The only point here is that the prosecution might be forced to use Section 4 when Section 5 (proof of absence of knowledge) is a good defence. The whole question is bristling with difficulties, but, in my opinion, the honest pharmacist has not yet sufficiently explored his proper avenues of defence against official persecution.

THE Druggists' Association of Budapest has arranged a series of lectures on perfumes.

## Chemical Society

THE annual meeting of the Chemical Society was held on March 22 in Burlington House, the President, Sir James Walker, F.R.S., in the chair. After the transaction of official business, including the election of Professor W. P. Wynne as President for the ensuing two years, Sir James Walker gave an address entitled *Symbols and Formulae*. A symbol stands for a thought, and it may be of assistance, and also a real hindrance, since the constant use of formulas presents the danger of forgetting what they actually mean. Formulas represent the symbolisation of theories, and the President proceeded to review the historical development of the symbols at present in use in chemistry. At first they stood for the planets of the gods to which the first elements known were dedicated; later, these forms were abandoned in favour of a circle with the initial of the Latin name, in the case of metals, inside the circle, while the symbols for non-metals were arbitrarily chosen. Dalton used these symbols, replacing the use of Latin by that of English in the choice of the initial figuring within the circle. The symbols we use in chemistry are not merely representative of the qualitative composition of a compound; they indicate also its quantitative constitution. Berzelius used a dot to represent oxygen, hence he indicated by "S̄" the compound now written "SO<sub>3</sub>." Turning to a consideration of the problems presented by organic chemistry, Sir James mentioned that with this class of compounds the formulas are intimately associated with the phenomenon of valency, and he then reviewed the various types of formulas suggested by Cooper, Kekulé, Würtz, Crum Brown. Various modifications were advanced for writing constitutional formulas whereby the valencies were expressed, until the bond linkage was generally accepted as the most suitable method of symbolising the structure of a compound. The physicist has now provided a new factor in electrons, and a new system of symbolisation is now in course of development based on these attributes of the atom. However, no system should be developed too rigidly, otherwise it will defeat its object, and in dealing with formulas and symbols we must not lose sight of the fact that they are destined to communicate knowledge. The annual dinner of the Society was held the same evening at the Hotel Cecil, the retiring President occupying the chair. Among the guests present were several distinguished French chemists, including Professors H. Le Chatelier, F.R.S., and G. Urbain, MM. P. Kestner and J. A. Le Bel, F.R.S.

## Wills

MR. ARTHUR CAREY, J.P., 140 Upper Parliament Street, Liverpool, of the United Alkali Co., Ltd., who died on February 6, left estate of the gross value of £3,371 16s. 8d., with net personalty £1,708 7s.

MR. JAMES EDWARDS CATTY, 39 Chester Terrace, Regent's Park, London, W., of Mansell, Hunt, Catty & Co., Ltd., paper capsule manufacturers, who died on February 3, left estate valued at £6,184 11s. 4d.

MR. FREDERICK JAMES LLOYD, F.I.C., F.C.S., The Anchorage, 47 Fillebrook Road, Leytonstone, who died on February 9, left estate of the gross value of £1,821 9s. 11d., with net personalty £1,710 18s. 3d.

BULGARIAN OTTO OF ROSE.—According to the "Manchester Guardian Commercial," there is a crisis in the production of otto of rose in Bulgaria. One of the causes is adulteration; it is very easy to adulterate it with geranium oil and difficult to prove scientifically and with certainty the presence of the foreign product. Trade in geranium oil is prohibited in the country, but many producers obtain contraband supplies. The Government has brought forward a Bill providing for an international competition to discover a scientific and practical method of detecting adulteration. A prize of a million levas is proposed.



## Dangerous Drugs Bill

### Committee Stage

The Dangerous Drugs and Poisons (Amendment) Bill was considered in Standing Committee B at the House of Commons on March 27. Mr. A. Ponsonby, Chairman of Committee, presided. There was a full attendance of members of the Committee.

Clause 1 of the Bill was added without amendment.

#### CLAUSE 2.

On Clause 2, which amends Section 13 of the Dangerous Drugs Act, 1920, the Home Secretary (Mr. W. C. Bridgeman) moved to insert the following:—

No proceedings for an indictable offence against this Act shall in England or Wales be instituted except by or with the consent of the Attorney General or by the Director of Public Prosecutions, and no person shall, on conviction for any offence of contravening or failing to comply with any regulation under this Act relating to the keeping of books or the issuing or dispensing of prescriptions containing drugs to which this Act applies, be sentenced to imprisonment without the option of a fine or to pay a fine exceeding fifty pounds, if the court dealing with the case is satisfied that the offence was committed through inadvertence and was not preparatory to or committed in the course of or in connection with the commission or intended commission of any other offence against this Act.

Mr. Bridgeman said the object of this amendment was to meet the points that were raised as to the excessive weight of the penalty in certain cases. By the amendment it made it necessary in the first place to get the authority of the Attorney-General or the Director of Public Prosecutions before proceeding on indictment, and in the second place it reduced the penalty for an offence which was merely one of inadvertence to a maximum of £50.

Sir Sydney Russell Wells, as one who raised the point on second reading, thought the amendment would meet the case.

Mr. Clayton moved an amendment to insert the words, "The conditions of any licence issued or authority granted under or in pursuance of this Act or." He explained that the licensed drug trade felt they were in a different category, and to safeguard their interests they would like to have inserted in the Bill the words he had proposed. Licensed holders felt they ought to have special considerations, and these words would safeguard their position materially.

The Home Secretary hoped the amendment would not be pressed. The failure of a licence-holder to enforce the conditions of his licence, he said, might have most serious consequences. He did not think they need be under any apprehension if his offence was one of inadvertence and he was able to prove it. To say that no breach of the conditions of any licence were to be brought under the clause seemed to him to open the door to the gravest possible consequences. He could not accept the amendment.

Mr. Clayton said that, having the assurance of the Home Secretary that these licence-holders were safeguarded in this matter for a technical offence, he would withdraw.

The amendment by leave was withdrawn, and the Home Secretary's amendment was agreed to.

Mr. Bridgeman next moved the following:—

Where a person convicted of an offence under this Act is a company, the chairman and every director and every officer concerned in the management of the company shall be guilty of the like offence unless he proves that the act constituting the offence took place without his knowledge or consent.

The object of this amendment, he explained, was to enable proceedings to be taken against responsible persons in the case of a company. It was the common form inserted in every Bill, and he thought it was necessary in this one.

Mr. Clayton moved an amendment to insert:—

"not being an offence of contravening or failing to comply with the conditions of any licence issued or authority granted under or in pursuance of this Act, or any regulation under

this Act relating to the keeping of books or the issuing or dispensing of prescriptions to which this Act applies."

He explained that he moved this in the interests of those who were licensed dealers in drugs. These words ought to be inserted, he said, to safeguard the chairman, directors and officials of a company who might be heavily fined for a technical offence of an official.

Mr. Bridgeman thought this amendment was less justifiable than the other. No member of a company who had really no knowledge of what was going on would have any difficulty in proving it was done without his knowledge or consent. He could not accept the amendment.

Mr. Clayton did not press his amendment, which was withdrawn.

The Home Secretary's amendment was agreed to.

Mr. Bridgeman moved to leave out in Clause 2 the words, "an attempt," and to insert "attempting or soliciting or inciting another person."

This was agreed to, and the clause as amended was added to the Bill.

#### CLAUSE 3.

On Clause 3 Mr. Bridgeman moved to leave out the words, "in actual practice." Mr. Hayday asked what was the purpose of prescribing unless a medical man was "in actual practice"?

Sir Sydney Russell Wells explained that the words "in actual practice" had an extremely technical meaning, and pointed out that if the words were left in, all medical officers of health who were not in active practice of medicine would be prohibited from prescribing drugs.

Lt.-Col. Fremantle said, supposing a member of the House of Commons were taken suddenly ill, a medical man in the House would not be able to write a prescription for him in order to save his life. It was very desirable that they should have this power.

The amendment was agreed to.

Mr. Bridgeman next moved to insert in Clause 3:—

Provided that if a seller is reasonably satisfied that a registered medical practitioner desiring to purchase a poison urgently requires it for the purpose of his profession, but is, by reason of some emergency, unable, before delivery, either to furnish to the seller an order in writing duly signed, or to attend and sign the book, the seller may send the poison to the purchaser to be handed over to him either in exchange for such an order or on an undertaking by the purchaser to furnish such an order to the seller within the twenty-four hours next following.

If any purchaser by whom any such undertaking as aforesaid has been given fails to deliver to the seller a signed order in accordance with the undertaking, or if any person for the purpose of obtaining delivery of any poison under the foregoing proviso makes a statement which is to his knowledge false, he shall be deemed to have procured the commission of an offence under the said section seventeen.

This was agreed to, and the clause as amended was added to the Bill.

#### CLAUSES 4 AND 5.

Clause 4 was also added without amendment.

On Clause 5 Mr. Bridgeman moved to insert:—

"and any statement in any such certificate as to the effect of the law mentioned in the certificate, or any statement in any such certificate that any facts constitute an offence against that law, shall be conclusive."

This, he explained, was to make more precise the effect of the certificate given. The amendment was agreed to and the clause was added to the Bill.

#### NEW CLAUSE

The following new clause (amending Section 17 of the Pharmacy Act, 1868, with respect to sales of poisons on medical prescriptions, etc.) was then moved by the Home Secretary:—

(1) Where any poison to which section seventeen of the Pharmacy Act, 1868, applies is supplied on and in accordance with a written prescription given by a registered medical practitioner under and in accordance with the provisions of the Acts relating to national health insurance, the seller of the poison shall not be required to make any entry in the book in accordance with the requirements of the said section.



(2) The said section seventeen shall have effect as if for the words "labelled with the name of the article and the word poison, and with the name and address of the seller of the poison," there were substituted the words "labelled with the name and address of the seller of the poison, with the word 'poison,' and with the name of the poison, and, in the case of a preparation which contains a poison as one of the ingredients thereof, with such particulars as to the proportion which the poison contained in the preparation bears to the other ingredients as may be prescribed by Order in Council."

Mr. Bridgeman said the new clause was to meet the suggestions made by the Pharmaceutical Society. The first part related to the prescriptions under the National Health Insurance Act, which were often given in duplicate, the original being sent to the Insurance Committee and the duplicate retained by the chemist. The second part proposed that the label should state both the name of the poison and particulars as to the proportions which it bears to the other ingredients, and such particulars as might be required by an Order in Council. He understood that both the chemists and the doctors were agreed upon these points. The new clause was passed and added to the Bill, which as amended was reported to the House.

Lt.-Col. Fremantle, on behalf of the medical members of the House, said they were much obliged to the Home Secretary for the way in which he had met them. They had tried to deal with the matter in the public interest and not for any professional interest. It was recognised by those who knew the facts, that two or three very long-standing difficulties had been removed by the Bill as amended. They had certainly helped and not hindered the policy of the Home Office in dealing with this dangerous trade.

Mr. Shinwell urged that everything should be done to make known to the men of the Mercantile Marine the provisions of the Bill and the very drastic penalties it imposed for dealing in this traffic. These pernicious drugs, he said, which had been responsible for this new legislation, were imported into the country on vessels which arrived in United Kingdom ports. It was known that Chinamen on British ships were themselves responsible for the importation of such drugs. Very frequently British seamen, when they touched ports like Antwerp, Hamburg, or any of the Chinese or Japanese ports, were offered inducements to carry drugs to this side. The penalties to be imposed by the Bill were very drastic, and he wanted the men of the Mercantile Marine to know all about its provisions. He would ask for an assurance from the Home Secretary that when the Bill became law he would have notices of its provisions placed in the fo'c'stle of merchant vessels, so that seamen should know of the Act.

Mr. Bridgeman said he would certainly lay before the Board of Trade the point put forward by Mr. Shinwell. He would like to thank the medical and pharmaceutical members of the House, who were good enough to meet them very fairly in regard to the Bill. It would be the last thing he should wish that anything should be put in the Bill which they might regard as a slur or cast any suspicion on them. He was confident that they would give all the support they could in putting down this horrible traffic.

**PARCEL-POST RATES.**—At the annual conference of the West of England Chambers of Commerce, held at Bath on March 14, a resolution was carried, on the proposition of Mr. David A. Evans (proprietor of Steele & Marsh, chemists, Bath), urging upon the Postmaster-General the desirability of reducing the present rates for parcel post.

**RUSSIA BUYS BRITISH PHARMACEUTICALS.**—It is reported that 6,000 kilos of medicinal preparations have arrived in Petrograd from Great Britain, and that a further consignment of 3,000 kilos is expected to follow shortly. These supplies are intended for distribution to the pharmacies in Moscow. The Soviet chief of the department of health has recently been in communication with pharmaceutical houses in this country asking for quotations and placing orders.

## Festivities

### Carnival Dance at Tottenham

THE Tottenham section of the North London Pharmaceutical Association held the second annual invitation carnival dance and social on March 22 at the Canadian Hall, High Road, Tottenham. There was a gathering of 250. Many guests came in fancy dress, and prizes were awarded for costume, lucky dips, raffles, and lime-light dancing. The hall was decorated by Mrs. S. B. Bately, and Mr. Fred Harvey acted as M.C., assisted by Mr. G. F. Weiss. A flashlight photograph was taken. Thanks were expressed to the trade houses who gave the forty prizes that were distributed.

### Ophthalmic Opticians' Dinner

THE annual dinner of the Institute of Ophthalmic Opticians was held at the Hotel Cecil, London, W.C., on March 22, Mr. G. E. Houghton (Margate), chairman, presiding. Following an excellent repast, the Rt. Hon. Lord Muskerry, senior Vice-President, proposed "The Institute of Ophthalmic Opticians." The chairman, in his reply, considered it a counsel of perfection that every person requiring glasses should consult an oculist. It is therefore, he declared, necessary for the optician to be well qualified to meet the needs of those whom he serves. One of the outstanding events of the year had been the inauguration of the Refraction Hospital, where students and others can get experience in the recognition of which cases to treat and which to refer to the ophthalmic surgeon. Mr. Aves, vice-chairman, in proposing "The Visitors," hoped the opticians would before long be engaging the House of Lords with a Bill. One section of the medical profession helped the refractionists by backing them up and the other section by their opposition, such as the recent report (*C. & D.*, II., 1922, 860), which has brought opticians together. He paid tribute to the work of Mr. W. H. Barker (President of the British Optical Association) for his work in the North of England, to Mr. J. H. Sutcliffe (secretary of the B.O.A. and registrar of the J.C.Q.O.) for his voluntary work in the latter office, and to the British Optical Association and to the wholesalers for their help. Dr. Margaret Dobson, who responded on behalf of the medical profession, felt that opticians are nearing a crisis in their history. The majority of general medical practitioners are aware and admit that refraction work is not within their scope, and frequently send patients to the optician. The Institute partly exists because it realises the responsibility of the optician who now prepares to meet it. The result is that he has gained the confidence of the public, and asks for a register of qualified opticians to be granted, that both parties may be safeguarded against quacks. The medical profession, including the ophthalmic surgeons, will not allow this to occur without a say in the matter, but it is to be hoped that when it crops up the medical profession will act generously and keep the benefit of the public in view. Mr. Barker said the B.O.A. claims to be the elder brother of the Institute, though this is not of much importance so long as the underlying idea is right. The chief object at the moment is perhaps education rather than legislation, and the former is one of the main planks of the Institute. Mr. Sutcliffe mentioned that when the scheme of the J.C.Q.O. was presented it was considered unworkable and unprofitable. It was, he declared, the smallest society in the world, consisting of only eight delegates and a whipping-boy, the registrar. He then dealt briefly with the work the Council is doing in supplying spectacles under the Insurance scheme (*C. & D.*, March 17, p. 357) and the compilation of a register of qualified opticians, and foreshadowed a pleasing report in twelve months' time. Mr. Raphael, on behalf of the Association of Wholesale and Manufacturing Opticians, said every member of the Association was watching with interest the movements of the Institute and wished it every success. He expressed pleasure at the work of the Refraction Hospital, which will fill a gap. The function was followed by a dance.



## Pharmaceutical Society of Great Britain

### Branch Meetings

**Aberdeen.**—A representative meeting of members and student-associates of the Pharmaceutical Society in the counties of Aberdeen, Banff and the Deeside portion of Kincardine was held in the Chamber of Commerce Buildings, Aberdeen, on March 14, Mr. James Farquhar in the chair. The chairman, in introducing Mr. J. Robertson Milne, Dundee, as representing the Executive of the North British Branch, extended to him and also to the resident secretary, Mr. Rutherford Hill, a cordial welcome. Mr. Robertson Milne then explained the Council's scheme, pointing out the advantages from the point of view of closer linking up and organisation. They had work to do to overcome the inertia and apathy in attending meetings which was too much in evidence in connection with their craft. The closer chemists got into touch with the Society the more they would understand its policy. The Council was faced with difficult circumstances, as, for example, in the case of the Dangerous Drugs Acts and in connection with the matter of admitting apothecaries' assistants to the Register. Some might think the Council could have acted with greater firmness, but they must have regard to the practical difficulties, and they would realise that more had been accomplished than some were disposed to allow. Financial aid in the matter of local organisation and the right of sending delegates to the British Pharmaceutical Conference meeting were valuable considerations. They might also do much in moulding the policy of the Society. For example, there was the important question of the training of apprentices. That was a matter that required to be faced, and it had been intimated that proposals were likely to be submitted to branches of the Society so as to have some report prior to the meeting of the B.P.C. in July. The scheme contemplated a matter in regard to which they were, in Aberdeen, in a very satisfactory position. He referred to giving attention to the educational interests of students and the giving of encouragement in the form of prizes. The Aberdeen Association had taken an honourable place in that connection with regard to the School of Pharmacy at Gordon's College. Mr. Rutherford Hill spoke on the general question of pharmaceutical organisation. Mr. Charles Simpson said there was ground for the feeling that pharmacy was in danger of being over-organised. Amalgamation was a matter deserving consideration. Several existing organisations might be united into one. On one point there would be agreement—namely, that the Pharmaceutical Society is the great sheet-anchor of the craft. They were all agreed as to the desirability at the present juncture of establishing a local branch, and they were indebted to Mr. Robertson Milne and also to Mr. Rutherford Hill for their statements. Office-bearers and Committee were unanimously elected as follows: *Chairman*, Mr. W. F. Hay, Aberdeen; *Vice-Chairman*, Provost W. S. Taylor, Inverurie; *Secretary*, Mr. W. Watt, 1 Chattan Place, Aberdeen; *Committee*, Messrs. D. Anderson, Aberdeen; E. G. Bryant, Aberdeen; J. D. Christie, Old Meldrum; R. W. Garrow, Keith; A. Henderson, Banchory; J. E. Reith, Culter; C. Simpson, Aberdeen; and J. Simpson, sen., Peterhead. It was remitted to the office-bearers and committee to make all arrangements for meetings and other details necessary for carrying on the work of the branch, the branch to be called the Aberdeen and North-Eastern Scottish Branch of the Pharmaceutical Society.

**Bradford.**—There has been no formal meeting of the branch since its establishment last June until March 22. Provisional officers were then appointed to bring the branch into a working unit, and the officers now elected are: *President*, Mr. F. W. Appleyard; *Vice-Presidents*, Mr. W. Sutcliffe and Mr. J. Cooper (pharmaceutical lecturer at the Bradford Municipal Technical College); *Treasurer* and *Hon. Secretary*, Mr. Norman Lander; *Council*, Mr. A. C. Pyecroft, Mr. W. E. Metcalfe, Mr. Foster (dispenser at Bradford Royal Infirmary), and representatives from Keighley, Skipton and Ilkley,

the latter three to be selected by the members in those areas of the branch. The Council is appointed for two years, and the officers are subject to annual election. Mr. J. Cooper then raised a discussion on securing recognition of the Bradford Technical College for Part 2 of the pharmaceutical training curriculum. Mr. Cooper said nobody questioned the suitability of the college or its equipment, and he suggested that a deputation from Bradford should thrash the matter out in all its details with the Pharmaceutical Council. He held that it could be proved that a large number of students would attend the Bradford College if recognised for Part 2. A proposition to this effect was moved by Mr. A. T. Bailes and seconded by Mr. J. W. Thorpe, but after further discussion it was agreed to leave the matter in the hands of the Council. The result of a postcard inquiry to members of the branch showed that if the college were recognised there were at least sixty-seven students in prospect for the Part 2 course from all parts of the Bradford area. The students at present at the college for Part 1 included several from Halifax, and there was every reason to believe the Halifax branch would support the recognition of the Bradford College for Part 2. This, it was suggested in discussion, was a complete answer to the objection which had been raised that there might not be sufficient students to justify the recognition of Bradford College without imperilling other colleges.

**Glasgow.**—A meeting of members and student-associates of the Pharmaceutical Society in Glasgow and West of Scotland was held in the Pharmacy Club House, 165 Hill Street, on March 21, Mr. Thomas Guthrie, Member of Council, in the chair. There was a large attendance. The Chairman explained that the meeting had been called by the Executive of the North British Branch for the establishment of a Local Branch of the Society. The main purpose was the tightening up and consolidation of the Society's organisation throughout the country. The Executive had appointed Mr. Alexander A. Dick, Bells-hill, to address the meeting, and Mr. Dick explained the scheme. Mr. Rutherford Hill pointed out that in Glasgow and the West the membership of the local branch would be greater than that of the other four local branches which it was proposed to establish in Scotland. In proportion to the number of registered chemists in the area a high percentage not exceeded in any other area were members of the Pharmaceutical Society. This result he attributed to the excellent organisation work which had been done by the Glasgow Association in conjunction with other Local Associations for a considerable number of years. He also expressed his great indebtedness to Mr. H. P. Arthur, who had made the local arrangements. After a discussion the following office-bearers and committee were unanimously appointed:—*Chairman*, Anthony McMillan, Glasgow; *Vice-Chairman*, Harvey Phillips Arthur, Glasgow; *Secretary*, Peter Methven Duff, 143 Dumbarton Road, Partick, Glasgow; *Committee*, James Oliver Chisholm, Glasgow; William Spence Culbert, Airdrie; Alexander Anderson Dick, Bellshill; Thomas Guthrie, Clydebank; Robert Inglis, Paisley; David McNay, Kilmarnock; Martin Meldrum, Ayr; John Murchie, Glasgow; John Henry Ramsay, Glasgow; William Thomson, Glasgow; James Tweedie, Glasgow; and John Weir, Clydebank. The name of the Branch will be the Glasgow and South Western Scottish Branch of the Pharmaceutical Society. Mr. Rutherford Hill explained a number of points arising under the Dangerous Drugs Act Regulations, emphasising the need for great care in carrying out every detail of the Regulations. One particular point that had arisen was the position of dispensing chemists who in some cases had a considerable practice in supplying the requirements of private nursing homes. A series of queries addressed to the Under-Secretary of State for the Home Office, was as follows:—

1. Does an Institution which takes in paying patients attended by their own medical practitioners come within the Regulations for Hospitals and Institutions, issued on August 15, 1921?

2. May the matron be supplied with, for example, 1 dozen Omnipon ampoules? There is no medical prescription.



3. May the matron possess a stock of such ampoules?

4. In supplying such ampoules, is a medical prescription required?

5. Out of 1 dozen ampoules only a few may be used for the patient. What must be done with what remains?

The answers were (1 and 2) in the negative. (3) The matron of a private nursing home may not be in possession of any drug to which the Dangerous Drugs Act, 1920, applies, unless the drug has been supplied on prescription, or dispensed by a doctor, for the use of a particular patient. (4) In the affirmative. (5) The surplus drugs should be returned to the doctor. As the medicines had all been supplied by the chemist there was a little doubt as to the reply to the last query.

**London (W.).**—The West London Branch held a social evening on March 15. The proceedings began with a reception by the chairman (Mr. W. E. D. Shircliff) and Mrs. Shircliff. This was followed by a supper, to which over 100 members and friends sat down, the two sexes being about equally represented. The rest of the evening was mainly devoted to an excellent and much-appreciated musical programme, under the capable direction of Mr. Harry Martin. During the evening copies of a report of the Education Committee of the Council on the practical training of apprentices were distributed; in this connection Mr. E. White briefly addressed the gathering, emphasising the importance of the subject, and stating that the Council would be glad to be assisted by suggestions and criticisms from members. The chairman added that these might be sent in writing to the secretary of the branch during the next few weeks. Mr. Melhuish, treasurer of the British Pharmaceutical Conference, pointed out that a considerable sum of money would have to be raised to meet the heavy expenses of the forthcoming Conference in July, which would be an international event. If London members desired to uphold the high standard of hospitality which had been set by other centres, it would be essential for every one of them to contribute to the funds of the Conference. He hoped to receive many substantial donations from his fellow-members of the West London Branch, but made it clear that he also looked for any would welcome quite small contributions from the rank and file.

**Newport (Mon.).**—On March 1 a meeting of the Monmouth and Newport chemists was held for the formation of a local branch of the Society. Mr. H. M. Lloyd, Merthyr, delivered an address, after which a branch was formed, with the following officers: *Chairman*, Mr. Shelley; *Vice-Chairman*, Mr. Clarke; *Secretary*, Mr. L. D. Lewis; *Treasurer*, Mr. T. J. Badgett. The Executive Committee was elected as follows: Mr. Dix (Pontypool), Mr. Thomas (Cwmbran), Mr. Pritchard (Abertillery), Mr. A. Francis (New Tredegar).

**Southport.**—A special meeting of Southport and District pharmacists was held at the Queen's Hotel, Southport, on March 13, at which a branch of the Pharmaceutical Society was formed. Mr. A. S. Rollin (President of the Southport Pharmacists' Association) presided, and among those present were Messrs. Moreton Parry (Liverpool) and H. O. Lloyd (Southport), members of the Council of the Pharmaceutical Society, and A. H. Messenger (ex-President of the Southport Pharmacists' Association). Mr. Rollin briefly introduced Mr. Moreton Parry, who explained the official scheme. Mr. Lloyd also spoke in favour of the proposed branch, and after questions had been answered Mr. Rollin moved that a branch of the Pharmaceutical Society of Great Britain be formed for Southport and district. Mr. Righton seconded, and the motion was carried. Mr. Kendrew, in reply to a question, said the area covered by the Association was from Crossens in the North to Hightown, near Formby, in the South, and inland to Ormskirk and Skelmersdale. He thought that area would be convenient for the new branch. Officers were then elected: *Chairman*, Mr. A. S. Rollin; *Secretary*, Mr. Kendrew; *Treasurer*, Mr. Gee; *Committee*, Messrs. H. Barton, A. H. Messenger, J. Denham (Hightown), Geo. Rushton, W. H. Smith, H. Spencer, T. R. Newton, H. Orr, J. Appleby, and E. W. Tapley.

**Sunderland.**—At a meeting of the Sunderland Branch, on March 14, Dr. Wm. Martin (Brady & Martin, Ltd.) gave his interesting lecture on *The Ductless Glands and Their Relation to Medicine* (C. & D., March 10, p. 344). Dr. Martin then described some of the work that is being done in this field, and advised his audience always to follow up any interesting point that might crop up in the ordinary day's work, for in that way they would create an interest in life. Mr. Darling (the President) then called on Mr. Ranken to propose the vote of thanks.

**West Cumberland.**—A branch of the Pharmaceutical Society has been formed in West Cumberland, and includes Whitehaven, Workington, Cockermouth, Maryport, Keswick, Cleator Moor, Egremont, and Frizington. At the inaugural meeting, held recently at Whitehaven, Mr. Hardy, Maryport, presided, and Mr. Pilkington Sargeant, Leeds, explained the official scheme. Mr. Hardy, Maryport, was elected *Chairman*, and Mr. Townley, Keswick, *Secretary*, and it was decided to hold a full meeting of the Branch in the near future, when the Committee will be formed.

**York.**—A meeting of the members of the Society in the York and district area was held on March 15, when Mr. F. Pilkington Sargeant gave an address in support of the proposal to form a local branch. The following officers were subsequently appointed: *Chairman*, Mr. F. G. Hines; *Vice-Chairmen*, Mr. M. Burgin and Mr. F. Newey; *Secretary and Treasurer*, Mr. H. Hodgson; *Committee*, Messrs. Bowness, Bell (Selby), Hooper and Loader.

## Associations' Winter Session

**Bradford.**—The winter session of the Bradford Pharmaceutical Association was brought to a close by a meeting on March 22, under the chairmanship of Mr. J. W. Thorpe, at which Mr. F. G. Hines, York, member of the Pharmaceutical Society's Council, gave an address on *Pharmaceutical Topics*. Mr. Hines congratulated the Association on having arranged the establishment of a Bradford area branch of the Pharmaceutical Society. He said he was keenly in favour of strong local organisation, and he thought it would have a big influence in "gingering up" the Pharmaceutical Council and giving it the healthy stimulus which was always desired and which sometimes it really needed. The local branches would be a strong lever for getting things done. Mr. Hines said nobody questioned the value of the work of the able leaders in pharmacy, yet it was essential that there should be a constant supply of younger blood in leadership, and he was convinced that it was in the area branches that young leadership would receive its training and be sent forward to the front of the craft. He was sorry to say the efforts of the Society to secure a fully qualified service for Army dispensing had, so far, proved abortive, and he felt that if the facts of the situation were made public, particularly the facts of the absurd inadequacy of the provision for that service during the late war, they would prove most damning evidence against the continuance of the present system. Mr. Hines was wholeheartedly in favour of a Pharmaceutical Reserve, as had been suggested years ago, and which would have been an inestimable boon in 1914 and onwards. In regard to the recent alleged inaccurate dispensing by chemists, Mr. Hines thought too much attention had been devoted to it, and he questioned the advisability of public disavowal. The Pharmaceutical Society had the whole matter under consideration, and Mr. Hines related some of the factors which militated against scientific accuracy in dispensing of prescriptions under the present conditions. Mr. Hines, in conclusion, remarked upon the great need for the right type of youth for pharmacy, and spoke in high appreciation of the manner in which the Eastbourne Pharmacists' Association had brought to the front the question of the standardisation of apprenticeship. A brief discussion followed, and Mr. Hines was heartily thanked, on the motion of Mr. L. B. Sutcliffe.



## Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

42, Cannon Street, E.C.4, March 28

BUSINESS has assumed quite a holiday aspect this week, in view of the approaching Easter vacation, and there is little of interest to report. Among the few changes of the week is an advance of £2 per ton in English castor oil, and French is also dearer. Zanzibar cloves have been sold at higher rates for forward shipment, but prices subsequently eased. Menthol is very flat and nominally cheaper; Japanese mint oil is also easier, and slab camphor can be had at a slight reduction on the previous figures. Sarsaparilla continues very scarce. Albumen is firmer, and agar agar quiet. Vanillin is dearer, and there is a fair demand for citric and tartaric acid. Sugar prices have had a temporary setback in the home market, this being due to the announcement of the date of the Budget (April 16) and the holidays.

Higher	Firmer	Easier	Lower
Castor oil (Hull)	Albumen (egg)	Camphor (Jp., slabs)	Calumba
" (French)	Coconut	" "	Soya bean oil
Cloves (Zan.)	(desicc.)	Cottonseed oil	(deod.)
(c.i.f.)	Lemon oil	Menthol	Sugar
Coconut oil	(c.i.f.)	Mint oil (Jap.)	
Copper	Lime oil	Pimento	
sulphate	Paraldehyde		
Linseed oil	Phenacetin		
Palm kernel oil	Phenazone		
Soda	Rubber		
diethylbarb.			
Vanillin			

### Cablegrams

NEW YORK, March 28.—Business is quiet. Curaçao aloes are dearer at 8½c., and Mexican sarsaparilla has advanced to 28c. Jalap is also dearer at 33c., likewise balsam tolu at 85c. Balsam Canada has advanced to \$12.00 per U.S. gallon, and antipyrine to \$2.90. Peppermint oil in tins is cheaper at \$2.65, and balsam Peru has declined to \$1.85. Buchu has fallen to 90c. per lb. for short, and mercury to \$70.00 per flask.

BERGEN, March 28.—The total catch of cod for the whole of Norway since the opening of the season amounts to 24,200,000, against 18,700,000 for the corresponding week of last year, and the yield of steam-refined medicinal oil is 49,268 hectolitres, against 35,729 hectolitres for the same period of 1922. Price of finest new medicinal steam-refined oil of 1923 crop is about 92s. per barrel, c.i.f. London.

### Exchange Rates on London

The following is a list of Continental and other exchange rates against the pound sterling on London prevailing at 4 p.m. on Tuesday:—

	Par value	March 21	March 27
Amsterdam, chqs. fl.	12.107	11.89½—11.90	11.88½—11.89½
Berlin .. marks	20.43	97.000—97.500	97.000—98.000
Brussels, chqs. fr.	25.22½	77.60—77.70	82.20—82.30
Calcutta, rup ..	2s.	16½d.—16¾d.	16½d.—16¾d.
Constantinople pstrs.	110	670—700*	685—725*
Greece .. drch.	25.22½	420—430	380—400
Italy, sight .. lire	25.22½	94½—94½	95—95½
Lisbon, sight escudo	53½d.	2½d.—2½d.	2½d.—2½d.
Madrid, sight pes.	25.22½	30.36—30.39	30.46—30.49
Montreal, cable ..	4.86½	4.79½—4.80	4.76½—4.77½
New York, cable \$	25.22½	4.69½—4.69½	4.68½—4.69
Paris, chqs. .. fr.	25.22½	69.05—69.15	71.00—71.10
Singapore .. t.t. dollar	28½d.—28¾d.	28½d.—28¾d.	28½d.—28¾d.
Switzerland .. fr.	25.22½	25.40—25.43	25.37—25.39
Vienna .. kr.	24.02	325.000—345.000	325.000—340.000
Yokohama, T.T. yen	24.58d.	24½d.—24¾d.	24½d.—24¾d.

\* Nominal.

### Crude Drugs, etc.

AGAR-AGAR is quiet, with Kobé No. 1 offering at 6s. per lb. on the spot and to arrive at 4s. 1d. c.i.f. No. 2 on the spot is 5s. 9d., and to arrive 4s. c.i.f. is quoted.

The exports from Japan during December amounted to 29,675 kin. valued at 54,787 yen. During the twelve months ended December 1, 1922, they were as follows:—

	1920	1921	1922
Kin .. ..	942,827	1,717,505	1,148,003
Yen .. ..	1,428,134	1,806,498	1,898,831

ALBUMEN.—Prime Chinese egg is firmer, 3s. to 3s. 1d. per lb. having been paid on the spot, and to arrive the sales include April-June shipment at 2s. 11d. and May-June at 2s. 11½d. per lb. c.i.f. terms.

ALOES.—The exports from the Union of South Africa during December amounted to 32,950 lb. (value £217), against 141,333 lb. (value £956) in 1921. During the twelve months ended December 31, 1922, the total exports were 564,079 lb. (value £3,675), compared with 549,504 lb. (value £4,293) in 1921.

ANNATTO SEED.—The pronounced scarcity continues, and famine prices are being paid for second-hand spot parcels. The new crop of both the Jamaica and Madras seed is very late in arriving, and in consequence consumers' stocks are practically exhausted. We understand that America has purchased direct practically the whole of the crops at higher prices than were offered on this side, with the result that dearer values may be expected for the limited quantities that are due to arrive early next month. Most of this has already been sold by the first buyers, so that the residue will be very small. Last week a small parcel of Madras seed was sold on the spot at 8½d. per lb. Importers report that they are unable to get any offers at present from primary source.

ANTIMONY is very firm, but English refined is retained at £38 for special brands. Foreign refined is scarce, the market having been rather depleted by the recent purchases made on American account. The nearest quotation ex warehouse is now £28 per ton. There is but little crude offering, and the price is nominally about £20 per ton.

BISMUTH.—There is an ample outlet for the moderate quantities coming in, and the price of the "ring" is maintained at 10s. per lb. for quantities not less than 5 cwt.

BUCHU.—The exports from the Union of South Africa during December amounted to 772 lb. (value £101), against 13,230 lb. (value £1,957) in 1921. During the twelve months ended December 31, 1922, the total exports were 124,046 lb. (value £15,763), compared with 124,842 lb. (value £21,257) in 1921.

CALUMBA.—Since last week's auction a fair quantity has been cleared at lower prices. Small and medium dullish root has been sold at 2s. 6d. to 3s. per cwt. Ordinary bold bright root has been selling in limited quantity at 5s. per cwt. We understand a fair amount of speculative buying has recently taken place, as importers do not expect to bring in further stocks for some time to come, as the present low values do not pay for the freightage alone from the source of production.

CAMPOR (REFINED).—Japanese 2½-lb. slabs continue quiet at 3s. 8d. per lb., and for March-April shipment 3s. 5d. c.i.f. is quoted. Japanese ¼ oz. tablets are quoted at from 4s. 5d. to 4s. 6d. per lb. on the spot, and for forward shipment 4s. 3d. per lb. c.i.f. has been paid.

The exports from Japan during December amounted to 4,304 piculs, valued at 881,812 yen. During the twelve months ended December 31, 1922, they were as follows:—

	To	1920	1921	1922
	Piculs	Piculs	Piculs	Piculs
British India ..	3,957	3,859	3,809	
Great Britain ..	1,339	2,899	4,143	
France .. ..	286	955	2,239	
United States ..	2,940	3,798	22,295	
Australia .. ..	283	736	778	
Other Countries ..	1,531	2,171	3,196	
Piculs .. ..	10,336	14,418	36,460	
Yen .. ..	4,965,350	2,870,414	7,246,755	



**CAMPHOR (CRUDE).**—Chinese 90 per cent. is quoted at 3s. 4d. per lb. on the spot, and 3s. c.i.f. for March-April shipment.

**CASTOR OIL.**—Hull make is £2 per ton dearer at £57 per ton for pharmaceutical for spot to June delivery. First pressing is £52, and second pressing £49 per ton in barrels ex works; less than one-ton lots 20s. per ton extra. French pharmaceutical is dearer at 60s. per cwt. in cases, and 58s. in barrels, ex wharf, London.

**CLOVES.**—Towards the close of last week the forward market was dearer owing to "bear" covering. The sales to arrive include January-March shipment at 11d. to 1s. 0½d. to 11½d. per lb. c.i.f., and March-May at 11d. to 1s. to 11½d. c.i.f. The spot price of fair Zanzibar is 1s. 0½d. per lb. According to the wharf statistics, the landings of Zanzibar cloves in London for the week amounted to 125 bales and the deliveries to 206, leaving a stock of 1,392, against 13,484 in 1922.

**COCONUT (DESICCATED)** is firmer. Fine is quoted on the spot at 44s. 3d., and medium at 44s. 9d. per cwt. To arrive, the sales include March-April shipment at 42s. 6d. to 42s. 3d. c.i.f., and April-May at 41s. 9d. c.i.f.

**GLUCOSE** is quoted at 28s. 6d. per cwt. duty paid, landed terms for water-white for March-April delivery.

**GUM ACACIA** is steady. Usual Kordofan sorts offer at 72s. 6d. per cwt., and cleaned at 77s. 6d. on the spot. To arrive, 64s. 6d. and 67s. per cwt. c.i.f. is quoted respectively.

**MENTHOL** continues very flat, and the nominal prices are easier at from 32s. 6d. to 33s. per lb. for Kobayashi-Suzuki on the spot. To arrive, March-April shipment is quoted at 31s. to 32s. per lb. c.i.f. It is reported that 275 cases were exported in New York this month.

The exports from Japan during December amounted to 378 piculs, valued at 637,686 yen. During the twelve months ended December 31, 1922, they were as follows:—

	1920	1921	1922
Piculs .. ..	3,705	2,299	2,468
Yen .. ..	5,489,815	2,172,480	3,322,906

**MERCURY.**—The trade demand has remained generally quiet, but there have been a few inquiries for export. The market has retained a steady tone at around £12 to £12 5s. per bottle, the quantities on offer by dealers being rather restricted. An Italian report states that the Government intend to continue to supervise the operations at the Monte Amiata mines rather than to entrust their exploitation to private interests.

**OPUM.**—A Constantinople correspondent writes on March 20:—"During the period March 6 to date, arrivals were as follows:—Druggists' 2,168 cases, 'softs' 120, Malatia 13. During the past fortnight 95 cases were sold, of which 90 cases of druggists' fetched 1,050 to 1,220 piastres, and 5 cases of 'soft' 1,282½ piastres per oke. Of the above amounts only 25 cases were destined for Japan. The forwarding agents are now experiencing difficulties in obtaining the original licence required for the *visa* of the invoices by the United States Consulate-General. For the same reason 25 cases which have been ready for dispatch for over a fortnight could be put on board only yesterday. Although the market is at present quiet, owing to the absence of large buyers, no decline in prices is expected as a result of the arrivals, or consequent on the news that a good crop is expected. In our opinion, the present inactivity is merely temporary, and we attribute it in the first place to the above-mentioned difficulties in shipping supplies to Japan, and secondly to the fact that European countries have recently covered their requirement. We do not consider the present stock of 405 cases to be excessive, considering that it is slightly below the amounts available last year, when 500 to 600 cases were lying in Smyrna, whereas to-day not more than 70 to 80 cases are in stock in that town. With regard to the prospects of the next crop, even should the inundations which have occurred in the vicinity of Smyrna not have caused any damage to the fields, we do not think that it will exceed last year's yield, which was a very good year, yielding 3,000 to 3,500 cases."

**PEPPER.**—Fair black Singapore is quiet on the spot at 4½d. per lb. Sellers of March-May and April-June shipment quote 4½d. c.i.f. Lampong is 4½d. spot. Tellicherry for March-April shipment is 40s. 9d. c.i.f., and Aleppy

41s. 3d. c.i.f. White Muntok is quiet at 6½d. per lb. on the spot, and for March-May shipment sellers quote 6½d. c.i.f.; April-June shipment has been sold at 6½d. c.i.f.; the value of white Singapore on the spot is 6½d. per lb., and March-May shipment is 6½d. c.i.f.

**PIMENTO** is dull at 2d. per lb. on the spot, and to arrive 18s. per cwt. c.i.f. is quoted. According to the wharf statistics the landings were 200 bags and the deliveries 121 bags, leaving a stock of 8,032, against 18,774 in 1922.

**RUBBER.**—A firmer tendency has prevailed since our last report, and values are better all round. The feature of the week has been the heavy buying for American account of spot and near rubber, and the further substantial deliveries from the warehouses. The cables from Singapore also report dearer c.i.f. values, and a reluctance to offer any large quantities. Deliveries last week amounted to 2,702 tons, whilst arrivals totalled 1,283 tons, with a decrease of 1,419 tons in the stocks. The London stock has now been reduced to 64,633 tons, against 72,203 tons at the commencement of the year. Quotations (Tuesday, 5 p.m.):—No. 1 standard crepe and ribbed smoked sheet, spot and March, 1s. 4½d.; April, 1s. 4½d.; April-June, 1s. 4½d.; July-September, 1s. 5d. per lb.; October-December, 1s. 5½d. Hard fine Para, dull and easier with an absence of demand, sellers at 1s. 3½d. Balata quiet and steady, W.I. sheet, 3s. 9d.; Venezuela block, 3s. 5d. Iquitos block in good supply at 1s. 7d. per lb.

**SARSAPARILLA** continues very scarce. The remainder of the Lima-Jamaica offered last week was subsequently sold at the auction price of 3s. 6d. per lb.

**STARCH PRODUCTS.**—Farina is quiet, with Japanese No. 1 offering at 16s. per cwt. on the spot. Dutch is 15s. per cwt. on the spot, and for prompt shipment 14s. f.o.b. is quoted. English rice starch crystals offer at £40, and Continental at £34 per ton. Superior Dutch dextrin 22s. 6d., No. 2 being 20s. to 21s. American maize starch powder is 14s. 1½d. per cwt. on the spot.

**WAX (VEGETABLE).**—Japanese is steady, spot and to arrive offering at 67s. 6d. per cwt.

The exports from Japan during December amounted to 2,944 piculs, valued at 129,160 yen. During the twelve months ended December 31, 1922, they were as follows:—

	1920	1921	1922
Piculs .. ..	7,303	28,220	48,585
Yen .. ..	346,022	1,018,975	1,950,128

### Essential Oils

THERE is only a quiet demand for most essential oils this week, and price changes are unimportant. Sicilian orange and bergamot are maintained at higher forward rates, the spot position rather favouring buyers. Lemon oil is a shade dearer in some quarters, and West Indian lime has been selling steadily with higher spot quotations in consequence. Japanese mint oil is dull and easier.

There was an increase of 62,472 lb. in the quantity of essential oils imported in February, compared with the same month of 1922 and 1921. In re-exports the corresponding figures show a slight decline. The exact quantities are as follows:—

	Feb. 1921	Feb. 1922	Feb. 1923
Imports (other than turpentine) .. .. lb.	139,883	254,067	292,529
" " " " value	£42,740	£62,353	£68,840
Re-exports " (other than turpentine) .. .. lb.	39,679	86,129	60,529
" " " " value	£21,841	£28,929	£26,339

**ANISE (STAR).**—"Red Ship" is dull and unchanged at 2s. per lb. on the spot, and 1s. 10d. c.i.f. to arrive.

**BERGAMOT.**—Present spot stocks of 37 to 39 l.a. are offered at from 11s. 6d. to 12s. 6d. per lb. as to seller. The c.i.f. price to arrive is 11s. 6d. to 12s. 2d.

**CAJUPUT** is quiet at from 3s. 10d. to 3s. 11d. per lb.

**CAMPHOR.**—White essential on the spot has been sold at 82s. 6d. per cwt.

**CASSIA** on the spot is unchanged at 8s. 3d. to 8s. 6d. per lb. for 80 to 85 c.a. The prices to come forward are about the same level.

**CITRONELLA.**—Ceylon on the spot is quiet at from 3s. 2½d. to 3s. 3d. per lb. The price to arrive is 3s. 0½d.



c.i.f. Java is firm at 3s. 10d. per lb. on the spot and c.i.f. for shipment.

CLOVE.—English distillers are selling at from 7s. 3d. to 7s. 9d. per lb.

CORIANDE.—East Indian distillate is offered at 75s. per lb.

DILL.—East Indian oil is quoted on the spot at 24s. per lb.

LEMON.—Lowest c.i.f. price is 2s. 8d. per lb., and the general figure is between 3s. and 3s. 3d. c.i.f. Spot is offered at from 2s. 9d. to 3s.

LEMONGRASS.—Cochin on the spot is quoted at 23d. per oz. for high-testing oil; lower percentage can be had at slightly under. The price to arrive is 2 $\frac{7}{16}$ d. c.i.f.

LIME.—West Indian distilled is firmer on the spot at from 3s. 3d. to 3s. 6d. per lb.

MINT.—Japanese dementholised Kobayashi-Suzuki is cheaper on the spot at 6s. 1 $\frac{1}{2}$ d. to 6s. 3d. per lb., and forward business has been done at 5s. 8d. c.i.f. From 5s. 9d. to 5s. 10 $\frac{1}{2}$ d. c.i.f. is quoted.

The exports from Japan during December amounted to 216 piculs, valued at 87,583 yen. During the twelve months ended December 31, 1922, they were as follows:—

	1920	1921	1922
Piculs ..	3,136	2,454	2,393
	(418,153 $\frac{1}{2}$ lb.)	(327,190 lb.)	(319,066 $\frac{1}{2}$ lb.)
Yen ..	1,812,366	558,413	758,867

ORANGE.—Sicilian sweet to come forward is firm at about 11s. per lb., c.i.f., spot value being about 11s. 6d., but, while stocks last, 10s. to 10s. 6d. would be accepted in some directions. For West Indian sweet 10s. 6d. is wanted. Bitter is quoted at 9s. 3d. c.i.f. to arrive.

PALMAROSA on the spot is unchanged at 17s. per lb. in pots, and 16s. 6d. c.i.f. to arrive.

PENNYROYAL.—Spanish, which has been in fair demand, is scarce and difficult to obtain at from 6s. to 6s. 3d. per lb. on the spot.

PEPPERMINT.—American on the spot is dull and unchanged at from 12s. 6d. to 13s. per lb.

ROSEMARY.—Spanish is quiet on the spot at from 1s. 7d. to 1s. 8d. per lb., which is unchanged.

SANDALWOOD.—B.P. oil continues in fairly good demand; from 25s. to 27s. 6d. per lb. is quoted.

SPIKE.—Spanish on the spot is steady at from 2s. 10d. to 3s. per lb.

THYME.—Spanish on the spot is steady for usual 28 to 30 per cent. oil at 5s. per lb.

#### Pharmaceutical Chemicals, etc.

THE complete stoppage of supplies from Germany continues to dominate the position on the spot. Business continues decidedly quiet, but prices are generally on the firm side, and many items tend to advance. It now seems quite certain that, until some arrangements are made with the Franco-Belgian authorities to permit the passage of goods between the United Kingdom and Germany, nothing more will be imported.

ACETANILIDE, although only in small demand, keeps very steady in the region of 1s. 5 $\frac{1}{2}$ d. per lb.

AMIDOPYRIN is unchanged at 13s. 6d. per lb., but there is very little inquiry on spot.

ASPIRIN.—Last week's advanced spot rate of 3s. 3d. per lb. is fully maintained, and it is quite possible for a further slight advance to take place. The German position is unchanged.

BARBITONE is steady on spot at 14s. 9d. to 15s. per lb. with business very quiet.

BENZOIC ACID remains quite firm as quoted at 2s. 2d. to 2s. 3d. per lb., with inquiry only occasional.

BROMIDES.—The spot position is still in buyers' favour with stocks plentiful and the demand poor; at the same time, Continental offers are much firmer; ammonium, 8d. to 9d. per lb.; potassium, crystals and granular, 6 $\frac{1}{2}$ d. to 7 $\frac{1}{2}$ d. per lb.; sodium, crystals and granular, 6 $\frac{1}{2}$ d. to 7 $\frac{1}{2}$ d. per lb.

CALCIUM LACTATE is steady on spot at 2s. per lb. with not much doing during the past week.

CHLORAL HYDRATE is being offered on spot at 4s. to 4s. 3d. per lb. for duty paid. There has not been much business, but prices are firm.

CITRIC ACID.—B.P. crystals on spot are available from 1s. 7 $\frac{1}{2}$ d. to 1s. 8d. per lb., less 5 per cent., and forward business is being done on a small scale at a penny less.

CREOSOTE.—B.P. is unaltered on spot at 2s. 6d. per lb. with the market quiet.

CREOSOTE CARBONATE remains dull on spot—quotations are unchanged at 10s. per lb.

GUAIACOL CARBONATE continues quite idle—quoted on spot at the nominal value of 8s. to 8s. 6d. per lb.

HEXAMINE.—Prices on spot are now very firm at 4s. to 4s. 3d. per lb. During the week there has been good inquiry. Continental prices have advanced, and German supplies are stopped.

HYDROQUINONE is offering on spot at about 3s. 6d. per lb. again, but business has not livened up so far. An improvement, however, is looked for in the near future and it is probable that prices will advance.

METHYL SALICYLATE is very firm at 2s. 6d. per lb.; business on spot has been good and supplies are limited. Nothing is coming in from Germany.

METHYL SULPHONAL continues to be offered at 13s. per lb., but little interest is shown on spot.

MUSKS (SYNTHETIC).—AMBRETTE on the spot is obtainable at from 35s. to 40s. per lb. KETONE at 40s., and XYLOL at from 9s. to 9s. 3d. per lb.

PARAFORMALDEHYDE is still on the up-grade, and most holders have moved their price up to the region of 4s. per lb.; some isolated lots may still be at 3s. 9d. per lb.

PARALDEHYDE seems firmer this week, and some of the most important dealers are not selling to-day under 1s. 6 $\frac{1}{2}$ d. per lb.; in some quarters 1s. 7d. is asked.

PHENACETIN continues to move upwards, and the general price quoted to-day for spot goods is at least 6s. 2d. to 6s. 3d. per lb.; Continental supplies are doubtful and quotations from that source are much dearer.

PHENAZONE also has moved to higher rates on spot, with good holders asking 7s. 4d. to 7s. 6d. per lb. Spot stocks are not large and Continental rates are still advancing.

PHENOLPHTHALEIN is quite steady at 4s. 10d. to 5s. per lb., with a tendency to firm up to the higher rate.

POTASSIUM PERMANGANATE.—B.P., stands quite firm as quoted at 10 $\frac{1}{2}$ d. per lb. on spot. Continental offers support this price, and supplies from Germany are stopped for the time being.

RESORCIN is a shade firmer on spot, although in small request at 5s. 3d. per lb.

SALICYLIC ACID.—The market stands very firm at last week's price of 2s. 2d. per lb., and there is a feeling that higher prices must come along if the German position continues for long.

SALOL holds at last week's higher rates of 2s. 6d. to 2s. 9d. per lb.

SODIUM BENZOATE is fully maintained at 2s. 2d. per lb.; the market has been quiet.

SODIUM DIETHYLBARBITURATE has advanced to 17s. per lb.; there has been very little doing at this rate.

SODIUM SALICYLATE.—It is difficult to find any offers of powder or crystals of good quality cheaper than 2s. 6d. per lb., and some holders expect still higher rates. German supplies are still cut off.

SULPHONAL is steady at about 12s. 9d. per lb., with the market dull.

TANNIC ACID.—Leviss is available on spot with the quoted rate firm at 3s. 6d. per lb.; business is light.

TERPENE HYDRATE is steady but in small demand only at 1s. 9d. per lb.

VANILLIN has advanced to 24s. to 24s. 6d. per lb.

#### Industrial Chemicals, etc.

THERE is a very steady undertone and most holders of spot goods are refusing to shade their prices. Spot stocks in many products are now on the short side, and in view of the generally much higher quotations from the Continent, further advances on spot are expected. The position in Germany is unchanged, and with the exception of the few parcels being picked up in Hamburg nothing is coming through.

ACETIC ACID.—Spot supplies have now been practically cleared and rates quoted are more or less nominal. To obtain supplies buyers will certainly have to pay high



prices. There are no signs of supplies coming in from Germany; 80 per cent. technical, £47; 80 per cent. pure, £48; 98 per cent. glacial, £70 per ton, in casks and demi-johns, ex wharf, London.

ACETONE.—Small spot parcels continue to be offered at about £125 per ton, but inquiry is small.

AMMONIUM (ANHYDROUS) is selling fairly well for forward delivery with the price in the region of 1s. 6d. per lb. for 99.95 per cent.

ARSENIC has remained firm, there being as yet no sign of any weakening in prices, while the scarcity of Cornish white powder is unrelieved, and its value is generally retained at £72 per ton delivered. Some few small lots have been coming in from Continental sources, but there is not much offering, while the only source where anything like a good order might be placed for June-July delivery is Greece.

BLEACHING POWDER remains on the quiet side, with prices steady at £11 per ton for 35/37 per cent. chlorine. Continental prices are firmer.

COPPER SULPHATE.—British makers' report their prices have advanced 10s. per ton for home and export, delivered and f.o.b.; in bags, £27; in casks, £27 10s. per ton.

CREAM OF TARTAR B.P. on spot has met with fair business and the market is very steady at about 92s. 6d. per cwt., and slightly less for one-ton lots.

EPSOM SALTS.—Commercial quality is steady at £5 10s. per ton, on spot, with some parcels floating about.

FORMALDEHYDE is fully maintained on spot at £87 10s. per ton, ex wharf, London. Spot stocks are not large.

GLAUBER'S SALT continues in poor demand, with the spot price about £3 15s. to £4 per ton, in bags.

LEAD ACETATE is very steady, with some spot offering at £36 for brown, and £39 for white crystals. Some little business has been done.

LEAD PRODUCTS.—Importers prices are unchanged on a firm but rather quiet market; red lead and litharge, £36 per ton; white lead, about £43 10s. per ton, c.i.f. London.

LITHOPONE continues to "firm up," and now there is not much available from dealers on spot. The price of 30 per cent. Continental red seal is quite £21 per ton.

OXALIC ACID is steady, but still in small demand; the spot price is about 6½d. to 7d. per lb.

POTASH CAUSTIC.—The spot position continues to become very difficult, with German supplies stopped. Supplies are now very low, and the price asked for 88 to 92 per cent. is firm at £35 per ton, in drums.

POTASSIUM CARBONATE on the spot is firm, and holders of stocks are in no hurry to sell out. Their price of £33 to £33 10s. for 96 to 98 per cent. is firm. German supplies are stopped.

POTASSIUM PERMANGANATE.—Commercial is well inquired for, but there seems to be little about. Prices are firm, in the region of 9d. to 9½d. per lb.

POTASSIUM PRUSSATE seems steady, although in no great demand. Business has been done in the region of 1s. 5d. to 1s. 5½d., and at these rates the market seems sound.

SODA CAUSTIC is unchanged, with dealers quoting: 70 to 72 per cent., £19 10s.; 76 to 77 per cent., £21 10s. per ton, in drums, ex wharf, shipping port. Business continues very light. British makers quote at unchanged rates to domestic consumers on contract at: 70 to 72 per cent., £20; 76 to 77 per cent., £21 10s. per ton, in drums, carriage paid. Their prices for export vary as to destination.

SODIUM BICARBONATE from British makers is still quoted at £10 10s. per ton, in bags, carriage paid; dealers are not quoting forward. A few spot parcels are available at competitive rates.

SODIUM BICHROMATE is steady at 4½d. per lb. for home trade from the British makers, and for export from the same source the price is slightly more.

SODIUM CARBONATE (washing crystals) are unchanged at £5 5s. per ton, in bags, carriage paid. This is the British makers' price to home trade only. Some spot parcels are quoted at level prices, ex stores.

SODIUM CHLORATE is dull, with the price quoted unaltered on the week at 2½d. per lb.

SODIUM HYPOSULPHITE is a good market, and the stoppage of German supplies keeps the market up in the region of £16 per ton for pea crystals, in 1-cwt. kegs. Commercial quality is also firmer at about £11 per ton, in casks.

SODIUM PRUSSATE is quoted on a dull market at about 9d. per lb.

SODIUM SULPHIDE.—The position on the Continent is very firm, with quotations on the up-grade. On spot there is not much business about and parcels are still offering at comparatively cheap rates: 60 to 62 per cent. solid, £15 to £15 10s.; ditto, broken, £16 to £16 10s. per ton, in drums; 60 to 65 per cent. concentrated, £15 per ton, in casks.

SULPHUR.—A report from Continental sources is to the effect that a selling arrangement has been brought about between American and Italian interests on the basis of which it is suggested that a higher level of prices may be established in the early future.

COAL TAR PRODUCTS, ETC.—There is quite a good tone, although business is not very good. Pitch is still advancing. Other products show little change of importance on the week. ANILINE OIL and SALT are steady, but remain slow in demand as quoted at 11d. per lb., packages free. BETANAPHTHOL has been a little more inquired for, with the price in the region of 1s. 4½d. per lb. PITCH, in London, is now quoted very firm at 192s. 6d. per ton. The position is as previously reported. PURE METHYL ALCOHOL is steady but slow on spot at £108 per ton. CARBOLIC ACID crystals are quoted at about 1s. 7d. per lb., but it is difficult to trace any supplies. CRESYLIC ACID is steady on a quiet market at 2s. 3d. per gallon. CREOSOTE OIL is fully maintained at 10½d. per gallon, naked, in bulk shipment, f.o.b.; the market is firm. PYRIDINE is maintained at 12s. per gallon, with little inquiry about. HEXAMETHYLENE is unchanged from the recent advanced rate of 3s. 9d. to 4s. per gallon; business is quiet. DISINFECTANTS are steady at 3s. 9d. per gallon, barrels free. NAPHTHALENE is well held at £19 per ton on spot. A fair inquiry is on the market; crude, £6 to £11 5s.; crystals, £16; powder, £16; balls, £24; candles, £28; tablets, £28 per ton.

#### Fixed Oils, etc.

WITH the exception of American turpentine the products in this market have shown considerable activity, and the tone is generally quite firm, with current rates on the up-grade. Coconut, palm-kernel and palm oils have all moved to dearer prices. ACID OILS.—This market stands very firm and supplies are now almost unobtainable. Groundnut is not available, and the price is nominal. Coconut has again advanced to 39s. 6d., and palm-kernel is also at 39s. 6d. COCONUT OIL has advanced for all grades, and a very firm tone was recorded at the close: Deodorised, 51s. 6d.; Ceylon, 46s.; Cochin, 50s. COTTONSEED OIL.—Spot rates have fallen back a little, but at these new prices the market closed quite firm: Deodorised, 47s.; common edible, 45s.; soapmaking, 43s.; crude, 40s. 6d. GROUNDNUT OIL continues steady at unchanged rates: Deodorised, 55s.; crude Oriental, for shipment, 45s. 6d. c.i.f. PALM-KERNEL OIL.—After last week's easier rates the market has advanced considerably and closes firm: Deodorised, 48s. 6d.; crude, for shipment, 42s. 6d. c.i.f. PALM OIL.—This market continues very firm indeed, and spot supplies are very limited, with the demand quite brisk; Lagos, 38s. Softs are a shade dearer at 38s. 3d., and hards are now at the very high figure of 41s., with hardly any supplies available. RAPE OIL is steady at unchanged prices: Refined, 49s.; crude, for shipment, 44s. c.i.f. SOYA-BEAN OIL.—The spot rate for deodorised has fallen back to 45s., with crude, for shipment, at 40s. c.i.f. LINSEED OIL (raw, naked).—Much better business has been moving during the few days of business this week and prices have moved upwards and close quite firm. On spot, 43s.; April, 41s. 9d.; May to August, 41s. 6d.; September to December, 39s. 9d. Hull: On spot, 42s.; April, 41s. 9d.; May to August, 41s.; September to December, 39s. 6d. TURPENTINE.—Buying has been on conservative lines and deliveries are good, while the French stocks are said to be exhausted. America has been mostly firm, and prices at this end closed easier on Tuesday. Imports are expected to continue light over the spring, and stocks here are likely to be further reduced. Spot stocks in London now total 11,500 barrels of American spirit. On spot, 110s. 6d.; March to April, 110s. 9d.; July to December, 82s. 9d. Some business for the late forward position at the price quoted has been done.



## Chemical Trade in Czecho-Slovakia

March 26, 1923.

THE Acting Commercial Secretary at Prague reports to the Department of Overseas Trade that the French occupation of the Ruhr and the present industrial situation in Germany are undoubtedly having their effect on the local market, but the increased demand arising out of the abnormal conditions obtaining in Germany has, as yet, scarcely been noticeable owing to the fact that the stocks on hand have been sufficiently large to cover all requirements. In view of the general depression in the textile industry, even the demand for aniline dyes has been almost imperceptible, yet in normal times the Czechoslovak requirements in dyes were so large as to be an item of great importance even to the largest German works. The present stocks, however, will not last for any great length of time, and there is no doubt that sooner or later there will be a shortage of aniline dyes and higher prices will be seen, especially as German prices have now practically attained the level of those ruling in the international market. The effect of the occupation of the Ruhr on the Czechoslovak heavy chemical trade has been to arrest the falling tendency of prices. Lower prices were expected for acetic acid, soda, borax, and chloride of lime, but in view of the temporary alienation of German competition no reduction whatever has taken place, and local prices are still two or three times higher than German prices, and often higher than those ruling in the Western States. Following are the market prices of chemicals (per kilo) ruling in Prague on March 8:—

Czech crowns	Czech crowns
Acetic acid (80%) .. 18.00	Magnesium sulphate .. 1.40
Acetone .. 21.00	Nitric acid (36° Be) .. 3.00
Alum .. 4.35	Oxalic acid .. 13.00
Barium chloride .. 5.20	Paraffin .. 3.50
Benzoin acid .. 38.00	Potassium chloride .. 10.00
Blue vitriol .. 8.00	Potassium cyanide .. 30.00
Borax crystals .. 6.50	Potassium nitrate .. 7.00
Boric acid .. 11.00	Potassium oxalate .. 19.00
Carnauba wax .. 16.00	Potassium permang. .. 15.00
Chloride of (chlorinated) lime .. 2.60	Sal volatile (98/100) .. 5.90
Chrome alum .. 7.00	Shellac T.N. orange .. 64.00
Dextrin .. 3.00	Sodium sulphide .. 3.80
Formic acid (80%) .. 12.30	Sulphate of soda (crystals) .. 0.80
Green vitriol or copperas .. 0.60	Sulphate of soda (powder) .. 0.90
Hydrochloric acid (20-22%) .. 0.95	Sulphide in pieces .. 1.80
Japan wax .. 12.50	Sulphuric acid (66%) .. 1.25
Lime .. 8.00	Tartaric acid .. 25.00
Liquid ammonia (0.910) .. 5.30	Turpentine (French) .. 19.50
	White vitriol .. 2.80

## German Economic Situation

PRACTICALLY no business is reported from the German chemical and drug markets, and there is scarcely any demand for either technical or pharmaceutical chemicals. In spite of this stagnation, the chemical industry continues to apply to the public for further capital, while the dividends to be distributed on last year's working are certainly indicative of the flourishing position of this branch of the nation's activities. It is also interesting to note that the chemical industry, as a group, absorbed the largest amount of fresh capital, thus heading the list, followed by the engineering industry. The situation of the chemical industry in the Ruhr and Rhineland is somewhat obscure, and in view of the almost complete cessation of exports, it is quite credible that the works are continuing their output, which is being stocked, awaiting the moment when normal trading will be resumed. The latest decree issued by the German Government prohibits the payment of taxes, custom duties, or of any charges whatsoever to officials of a foreign Power, or to accept payment on behalf of the latter. Further, the transport of goods between occupied and unoccupied Germany is prohibited, except by permission of the competent German authorities. Offenders will be punished by imprisonment not under three months, and in particularly grave cases, by hard labour up to five years, and the goods, or cash, in question will be confiscated. This exhortation to resistance is not designed to facilitate matters, and it is interesting to note that recently the British Chemical Trade Association submitted the following proposal to the Government, with a view to assuring the safe passage of British-owned goods, both inwards and outwards:—That a licensing office be set up immediately in Cologne, the personnel of which should be constituted similarly to that of the original licensing office at Bad Ems—that is, it should be representative of British, French, and German interests; that this office should be competent to deal only with goods destined from or to the United Kingdom or goods on British account consigned overseas; that this office should be recognised by all parties and its licences ensure the free passage of goods covered by them; that, in view of the fact that all goods consigned from Germany to the

United Kingdom are liable to the German (Reparation Recovery) Act duty of 26 per cent. *ad valorem* upon importation into this country and that such duty is recoverable from the German Government, the duties paid on such goods consigned to the United Kingdom should be paid to the German Government as under the original Bad Ems system; that duties on goods consigned overseas on British account should be paid to the occupation authorities; and, finally, that ships sailing under the British flag should be exempt from seizure, examination, or restraint upon the Rhine, which is an international waterway. The British Chamber of Commerce in Cologne has also made certain definite suggestions, and it remains to be seen what measures will eventually be taken likely to satisfy the demands of all parties concerned—on the face of it, a truly impossible problem. In connection with trade with Germany, importers will be interested in the following notice issued by the Commissioners of Customs and Excise:—Notice is hereby given that in view of the fact that with certain exceptions goods exported from Germany to Great Britain or Ireland are required to be invoiced in sterling, invoices in marks will not, after March 17, 1923, be regarded as affording a satisfactory basis for the assessment of value in the case of goods subject to this requirement, for the purpose of the payment of the duties imposed by the Finance (No. 2) Act, 1915, or the Safeguarding of Industries Act, 1921, or of the levy collectible under the German Reparation (Recovery) Act, 1921. Declarations of value based on and supported by sterling invoices will, however, be taken into consideration on their merits as heretofore. In any case where it is claimed that goods normally subject to the requirement of invoicing in sterling have been licensed for export from Germany on an invoice in marks which is put forward as the basis for the declaration of import value, confirmatory evidence must be produced in the form of a certificate from the competent German export licensing authority, issued by a British Consular Officer, to the effect that the invoice price in question, viz., marks (*state number*), was accepted by that authority for the purpose of issuing the export licence for the goods, without any condition being imposed as to the rate of sterling exchange by reference to which it was to be calculated. If the mark price was, in fact, calculated by reference to a specified rate of sterling exchange, that rate should be stated in the certificate. An authoritative announcement has been made to the effect that the Inter-Allied Rhineland High Commission has decided to reintroduce, as from March 25, the German custom tariff, in the form in which it stood in April, 1922. Consequently, from that date the charges of the German tariff will be levied on all goods imported into the occupied territories, in the place of the uniform *ad valorem* duty of 10 per cent. hitherto collected by the Franco-Belgian authorities. Needless to say that, as far as trade with German nationals is concerned, this change does not legalise the position for them, and in this respect entails no change in the situation. On the contrary, the conflict has assumed a more acute character since the issue of the above-mentioned decree, which makes payment of these dues to the occupying authorities a criminal and, indeed, almost treasonable offence. The German papers have even begun to publish the names of firms, as a black list, which have applied for licences or complied with the new Franco-Belgian ordinances.

## New Alkaloid Factory in Java

THE Java Cocaine Fabrieken, in Soekaboemi, has recently been acquired, according to "De Indische Mercur," March 23, by Dr. W. van der Schalk, who proposes to bring the works up to date, in order to undertake the manufacture of alkaloids from plants occurring in Java. In addition to utilising cinchona bark and tea siftings for the manufacture of quinine salts and caffeine, the preparation of crude cocaine from coca leaves is also included in the new owner's programme.

## High Percentage Bergamot Oil

THE present season's bergamot oil presents several abnormal characters. Dottore Salvatore Gulli of the Real Farmacia, Reggio, Calabria, who has analysed many samples of oils from different districts of undoubted purity, informs us that the percentage of linalyl acetate (generally 44 to 46 per cent., and occasionally from 46.50 to 48 per cent.) is higher than it has ever been before. Optical rotation is as in preceding years; specific gravity is lower, due to high linalyl acetate content. "These facts," says Dott. Gulli, "suggests that it is wrong to contract on the basis of 38 per cent. i.e., because the fine odour of the oil is not due to this ester alone. If so, this season's oil should have a specially delicate odour."





### Unemployment in the Drug-trade

SIR,—Let me assure Mr. John Williams (*C. & D.*, March 24, p. 421) that I have no wish to discourage any qualified man who is out of a berth; but there is no advantage gained by looking at facts as we should like them to be instead of as they actually are, and in this respect Mr. Williams falls into several errors. When he says that company shops delay the progress of qualified men he is not strictly accurate, as all company shops are legally bound to employ at least a qualified manager. It is true there is a shortage of shops to let, but equally there is a shortage of both business and living accommodation all over the country, and this is not peculiar to pharmacy. Again, when he says that the Insurance Regulations compel the people to pay for qualified labour, has he computed what the payment allotted for such labour amounts to? It would be a good day's work for any man to deal with fifty scripts, including the necessary work of taking in and handing out to customers, making solutions, filling up stocks, copying, etc., and for this he receives an average of fivepence a script, making £1 0s. 10d. At least half of this would be taken up in expenses, leaving him £2 15s. for a working week of five and a half days. Would Mr. Williams consider this adequate pay? And, lastly, when he buys one of those much-neglected businesses, he will find that to make it pay he puts in twice as much work, many more hours, and is content with much less pay at first than an assistant would be satisfied with, as the most strenuous job of all is working for oneself.—

Yours faithfully,

FIVE DAYS FOR NOTHING (26/3).

SIR,—Practically all your correspondents, while discussing the conditions of employment in pharmacy to-day, overlook the basic fact that the foundations of the Pharmaceutical Society are built on sand, in that it has no power, legal or otherwise, to restrict the dispensing of medicine to pharmacists. If all the pharmacists in the country were to come out on strike, it would not necessarily make any difference to the supply of medicine, as it could be carried on from surgeries and clinics by unskilled labour under the nominal supervision of medical men. The big trade unions are in a position to stop the whole of their work throughout the country if they desire, and they go so far as to do this if a non-union man is employed; it is a Gilbertian situation that it should be a labour representative who is promoting the Bill in Parliament to admit unqualified men to the Register without examination, a direct negation of trade-union principles. I have noted two items for comparison this week, one an advertisement by a pharmacist, who offers his services at 1s. 6d. an hour, and another a case in a local paper, in which a bricklayer's improver, a lad of nineteen, was receiving a standard wage of 1s. 11d. an hour, an unfinished mechanic not fully grown being therefore worth fivepence an hour more than a qualified professional man.—Faithfully yours,

T. B. QUALIFIED (24/3).

### Marking Prescriptions

SIR,—I have returned from London, after attending the Retail Pharmacists' Union Conference as delegate from Brighton, and must confess to some disappointment at the reception given to the Brighton motion asking the Executive for active support to the South-Eastern Federation's scheme for marking prescriptions. Unfortunately, the three-minutes' limit imposed by the standing orders was too short to permit as adequate a presentation of the scheme as its importance demands. I therefore ask the further publicity of your columns. When a prescription is first dispensed the price is usually accepted by the patient without question; it is when the repeats reach the third or fourth dispenser

that trouble arises, and it is only natural that the patient should feel suspicious when the prices have varied as much as 100 per cent. If some degree of uniformity in prescription pricing can be secured ("positional" businesses will always be exceptions), it will bring pecuniary benefit to every chemist, and remove a frequent source of friction between pharmacist and pharmacist, and pharmacist and patient. Let us recognise the fact straight away that dispensing will have to be better done, unless we are constantly to be subjected to the undesirable "charges of the Trotter brigade." The fees must be such as will pay for the time, care and skill that accuracy demands, and the first dispenser should be able to fix this charge without the fear that his neighbour will let him down. All the objections can be summed up in "fear of cutting." To indicate what price has been charged in no way engenders cutting. If the second dispenser is an outsider and wishes to cut he will cut, whether the prescription be marked or not. In fact, if unmarked, his cut will be the lower, because he will want to be sure that his charge is below the first one. If marked, however, the implied sense of confidence will have some effect. We have this matter in our own hands, and the measure of our coherence, discipline and loyalty will be the measure of our success. The marking of prescriptions is carried out effectively at Eastbourne, largely at Brighton, and to some extent throughout the South-Eastern area. If the scheme can be worked successfully in a town like Brighton, an area containing every class of business, there is no town where it will not be of benefit. Dispensing is the chemist's *raison d'être*—his function. Surely there is no pharmacist who will not agree that it is better to get the pricing thereof on a satisfactory footing than to go, cap in hand, to Messrs. Fulford Beecham & Co., pleading for an extra halfpenny per box.—I am, etc.,

EDGAR JONES.

Brighton.

SIR,—The question of marking prescriptions in an endeavour to secure some uniformity for repeats was mentioned by our delegates to several others at the recent R.P.U. Conference. All approved in theory, but expressed the opinion that the second dispenser could not be trusted to respect the original marking. I believe this mistrust is not justifiable, and have yet to hear of the first case where one Brightonian has deliberately let another down. It may be we are privileged down South. We are! Still, I believe all chemists possess a sense of loyalty, if only we can reach it. Meanwhile Brighton scripts are being marked, and I hope other towns will respect.—Yours truly,

K. J. PADWICK.

Brighton.

### Insurance Tariff Changes

SIR,—The new tariff list for appliances (*C. & D.*, March 3, p. 306) still leaves some of the complaints of Panel chemists unredressed; it is true that lints and wools will now have to be supplied in complete packets, and it will take a little time to get used to the size required, as doctors will still order lint by dimensions instead of by weight; but plasters are still left in the original position, and there is wastage on this line. When a doctor orders a plaster 12 x 12 in., a narrow strip is left over, which is no use for anything, and I have a collection of these strips at present. Elastic-web bandages are quoted 2½ in. x 1 yd.; these bandages are generally prescribed in 6-yd. lengths; and it has been my experience that, in respect of appliances, the Pricing Bureau adheres absolutely to the letter of the tariff. If I supply six yards when one is quoted, will it be paid for? The same remarks apply to gauzes. At first sight it seems as though chemists will have to keep a duplicate stock of all dressings; but, as these new ones are to conform to a B.P.C. standard, it will become a serious question whether we should not adhere to this standard for retail sale as well as Insurance work, and so have less capital locked up.—Yours truly,

"B.P.C." (3/3).



## Legal Queries

*R. and D.* (20/3).—LABELLING HOUSEHOLD AMMONIA.—In the case of proprietary preparations, it is sufficient compliance with the law if the retailer place his name and address label on the outer wrapper.

*Perplexed* (21/3).—You may sell diluted laudanum (1-6) without recording the sale in the Poisons or "Dangerous" Drugs Register. Laudanum of that strength comes within Part 2 of the Poisons Schedule, and should be labelled "poison."

*Z. A. D.* (2/3) owes an amount to the South African Government, and asks whether payment could be enforced in this country. [The South African Government could take proceedings against "Z. A. D." in this country, or could obtain judgment against him in South Africa and enforce the judgment here.]

*Parchment* (25/3).—Any chemist "keeping open shop" for the sale of poisons may sell tr. opii. diluted to the required limit. A chemist, not in business or practise, is not an "authorised person" to be in possession of tr. opii. It does not require a prescription to be able to purchase diluted laudanum, but the seller must comply with the provisions of the Pharmacy Act.

*T. O. D.* (8/3) is tenant of a house at a weekly rent of 30s. A leak occurred recently in the pipe leading from the kitchen grate boiler to the cistern. "T. O. D." engaged a plumber to repair the damage; is the landlord responsible for the cost of the work? [Unless, under the tenancy agreement, the landlord has expressly agreed to do repairs of the nature in question he is not under any liability.]

*E. M.* (6/3).—Imports from Ireland are to be on the same basis as imports from any of the British Dominions, but this refers in the case of proprietary medicines to the alcohol, sugar or other dutiable articles they contain, the duty being paid according to the schedule given in the *C. & D. Diary*. The medicine-stamp duty is an internal tax, which is payable by the first vendor in this country.

*J. W. G.* (16/3).—The local anæsthetic containing cocaine for use in the dental surgery should be ordered by the dentist on a signed order, with address. You should then enter the sale in your Cocaine Register, with strength, etc., and keep the order. There is no need for personal application for the solution; the onus is on you to see that the dentist receives it. The new suggestions put forward will not affect such a transaction.

*S. J. S.* (18/2).—APPRENTICESHIP.—The number of hours will begin from your registration at 17 Bloomsbury Square. It is immaterial for this purpose whether your agreement is in legal form or merely an understanding. The point is that the hours must be affirmed by the pharmacists who employ, and the total must reach 4,000. In the case of death of any of them before the expiration of the hours, a declaration for that part would be required.

*W. R.* (8/3) has an apprentice who has just passed his sixteenth birthday. What contributions are payable in respect of the lad on account of National Health and Unemployment insurance? [As regards Health Insurance, the total contribution is 10d. per week, of which 5d. may be deducted from the lad's wages. The total Unemployment Insurance contribution, while the lad is under eighteen, is 9½d. per week, of which "W. R." must pay 5d. and the lad 4½d.]

*W. D. R.* (19/3) is unable to obtain the return of an amount which he lent more than six years ago. As the debt is now statute-barred, what means are available to "W. D. R." to recoup himself? [If, owing to the absence of payment of interest or acknowledgment of his indebtedness by the borrower, within the past six years, the debt is, in fact, statute-barred. "W. D. R." is no longer in a position to bring an action for the recovery of the amount due to him. On the other hand, the borrower's indebtedness still remains, and if at any time, "W. D. R." has under his control money belonging to the borrower he will be justified in retaining the full amount of the loan.]

*W. H. & Co.* (23/3).—Laudanum diluted to the extent you mention is outside the Dangerous Drugs Act, but comes within Part 2 of the Poisons Schedule. The formulas you refer to may be made up without the intervention of a doctor, but you may not dispense old prescriptions containing tr. opii. in ten-drop doses unless the mixture is diluted above the limit of 1-500 morphine anhydrous. Ten drops of tr. opii. should be diluted to 3j., which is a "safety" limit.

*R. M.* (10/3).—The executor of a chemist has the privilege of continuing the business under the conditions laid down in the Pharmacy Acts. This privilege does not extend to subsequent purchasers of the business. If the purchaser is not a registered chemist he can regularise his position by being a shareholder in a limited company owning the business. If the company uses the title "chemist" one of the directors must be a chemist, and in any case a chemist must be the *bonâ fide* superintendent of the business.

*Raison* (20/3).—You may sell "dangerous" drugs to authorised persons, such as doctors, dentists, and even oblige, in need, a fellow-chemist; but as the law and regulations stand, it will be necessary for your customers to sign the Poisons Register under the Pharmacy Act, 1868, and you should make a cross reference in the "Dangerous" Drugs Register. These sales are not regarded as wholesale transactions, but this does not exclude them from Section 17 of the Pharmacy Act. The amending Bill will modify this procedure.

*S. R.* (17/3) has been employed by a chemist in a provincial city, as first assistant, for the past twelve years. Under the terms of his agreement he undertakes not to compete with his employer or his "executors, administrators or assigns," by being concerned with a similar business within a radius of one mile from his employer's shop for a period of five years after leaving his service. If his employer sells the goodwill of the business, will the purchaser be entitled to the benefit of this restrictive agreement? [We consider that the purchaser of the business would be entitled to enforce the agreement to the same extent as "S. R.'s" original employer. The Court would uphold the validity of the restriction provided that it is not wider than is reasonably necessary for the protection of the owner of the business. The restraint does not appear to us to be unreasonable having regard to the limitations of area and duration.]

## Retrospect of Fifty Years Ago

Reprinted from  
"The Chemist and Druggist," March 15, 1873.

### Pharmaciennes

It is with a sentiment of profound melancholy that we anticipate the probable question of the day, for the next annual meeting of the Pharmaceutical Society. The inability to estimate the proper size of objects is a defect often to be traced in minds of an otherwise wide grasp. They see men as trees walking, while women assume the proportions of mountains when they venture into pharmaceutical regions; and here we have a most distinct specimen of this falsity of vision. Of course, it may be that the defect is ours, and we, unable to grasp its proportions, are unfit to cope with it. Let it be clearly understood, the question is not whether women shall be permitted to become chemists and druggists—respecting that, the Council has not the least power to decide. All that is involved is, whether a few young ladies shall be permitted to become associates, and perhaps, ultimately, members of the Pharmaceutical Society. Ordinary people can scarcely see that the fate of empires can be hanging on such a point. And yet, month after month, the legislation of our body has discussed it with ever-increasing energy, until at last overpowered by their sense of its magnitude, and with their own incapacity to deal with a question of such vastness, they have postponed their decision to the now Council, that is, practically, to the Society generally. The co-operative squabbles, the education discussions, the Pharmacy Act, and its consequences, these were subjects that men could meet and discuss with some spirit. But the idea of whipping up members from Bristol, Manchester, Glasgow, and all the country over on this little dispute is almost ludicrous.

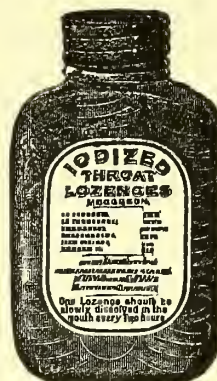




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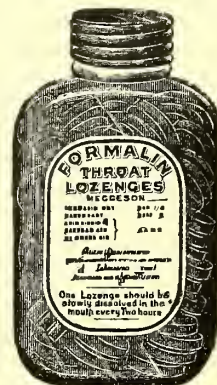
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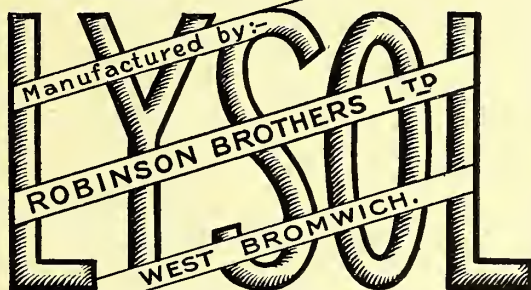
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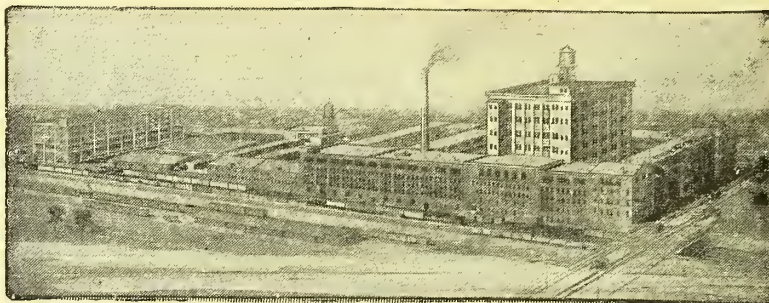
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**1/3** per Bottle

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Net Price : 1 gross delivered carriage paid and in free case to your door, £7.

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**1/3**



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**P.A.T.A. Prices :**

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I. It is computed to be 125 times as rich as butter in fat soluble Vitamin "A."

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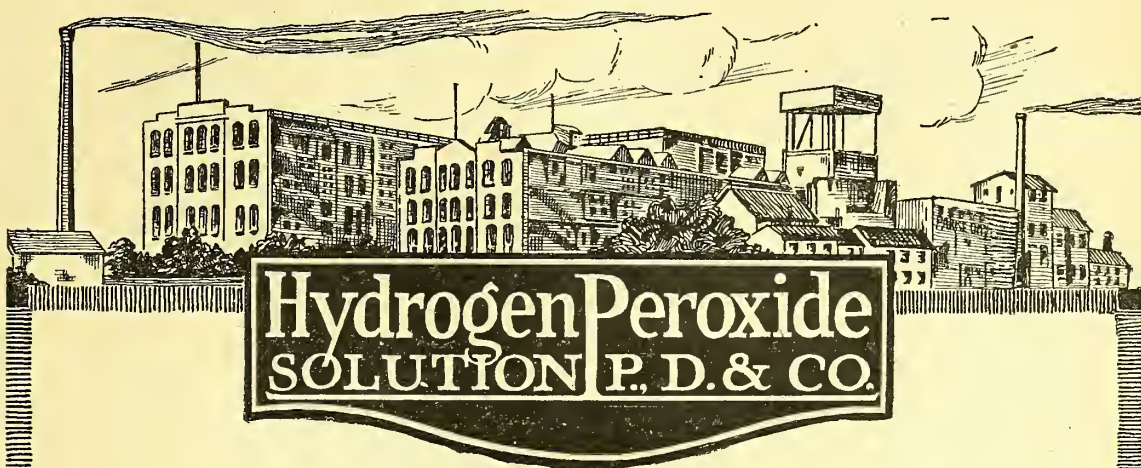
1s. 3d. size	..	..	..	..	..	10s. 6d. per doz. net.
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**Minimum quantity £5 value, Packages FREE, Carriage PAID. CASH WITH ORDER.**Cheques to be made payable to **THOMAS BEECHAM**, and crossed "Westminster Bank, Ltd., St. Helens."

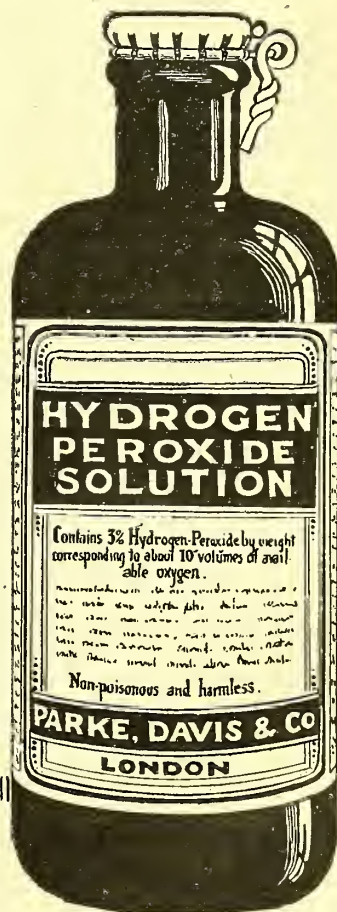




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DUMMIES AND SHOWCARDS ENCLOSED WITH EACH ORDER.

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33½ per cent. on cost to our Distributors.

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*Orders despatched in strict rotation.*

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PARK STREET, LINCOLN.



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*Most Effective Spring Advertising Schemes  
are now in progress. Are you taking  
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WILL RECEIVE 5 PER CENT. EXTRA  
DISCOUNT—i.e., 5 per cent. extra profit on  
a bigger turnover. That **MUST** be true.  
Try one fortnight, and note the extra  
business. Lots of chemists have found  
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splendid lines to be real moneymakers.  
Why not at any rate try one window  
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High radio activity through the skin to the lower layers and organs.

**Cures** { **RHEUMATISM, BRONCHITIS,  
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Sold in Fancy Boxes at **1/3** and **3/-**, also by the yard at **12/-**,  
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**REDUCTION IN PRICE  
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Price to the Public **5/-**

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SNOWFIRE sales keep on spreading.  
SNOWFIRE "catches on" once it is  
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many other uses.  
Better profit for you than 1d. or 2d. tablets and it does not  
affect sale of expensive creams. Let people know you sell

Write to-day  
for Terms.

## Snowfire

TABLET

F. W. HAMPSHIRE & Co., Ltd.,  
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**Dr. Bengué's Ethyl Chloride** for Local  
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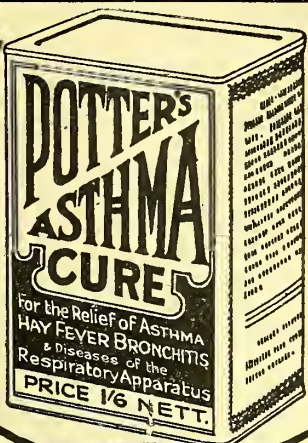
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**Methyl Chloride.**

*Ask for Special Terms and Showcards for  
Dr. Bengué's Balsam.*

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52 Charlotte St., LONDON, W.1.





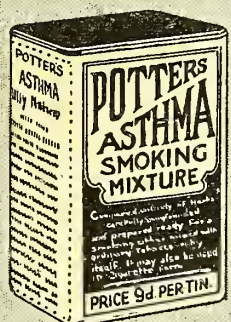
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14/- DOZ  
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AND AT  
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**Price to the retail trade  
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## **Sulfluid**

RAPID CURE.

INSTANT RELIEF.

**RINGWORM, SCABIES, IMPETIGO**

SOVEREIGN CURE FOR

**ECZEMA AND OTHER SKIN DISEASES.**

The principal ingredient in this quick and certain cure for skin diseases is Sulphur in a liquid form hitherto unobtainable. Owing to its extraordinary power of penetration it reaches the root of the trouble and can be guaranteed to effect a cure of the most stubborn case of ringworm within 14 days—Scabies and similar diseases in very few applications. It is guaranteed to be non-poisonous, non-corrosive and non-irritant to the most tender skin.

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*Packed in half-dozens in attractive display cartons.*

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Sulfluid Household Ointment is the same potent solution in ointment form and will be found invaluable in the treatment and rapid cure of minor skin troubles, such as cuts, grazes, burns, scalds, chaps, boils, pimples, and will impart a smoothness and freshness to tender skins in cold or bad weather.

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*Packed in dozens in attractive display cartons.*

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*Sole Distributing Agents to the Wholesale and Retail:*

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# *Cellophane*

**What  
Is It?**

## **CELLOPHANE**

is a transparent film of pure Cellulose, absolutely air, grease, and odour proof, unaffected by cold, heat or moisture, and sterilisable.

An ideal wrapping for Soap, Drugs, Tablets, Bath Crystals, Perfumery, Provisions, Sweets, Surgical Dressings, Articles of Toilet, Sponges, etc., etc.

Will keep your Goods, Boxes, Bottles, and delicate Labels clean on the Counter and in Shop Windows, allowing the Articles to be seen by transparency. Can be had colourless, coloured and embossed.

Also in the shape of Labels for Bottles, and Discs for Creams, Ointments, Boot Polish, &c.

**C. llophane Envelopes and Bags, printed or not.**

**Agents Wanted where not represented.**

*Prices, Samples and Particulars from*

**The CELLOPHANE COMPANY**

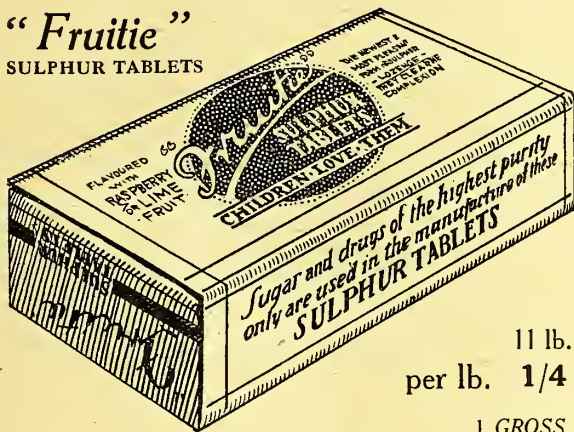
(GUSTAVE LECLERCQ).

**7, 8 & 9 Bird Street, LONDON, W.1.**



*Clears the Complexion.*

**"Fruitie"**  
SULPHUR TABLETS



## A NEW FORM OF SULPHUR TABLETS

AN ELEGANT CONFECTION  
FLAVOURED WITH LIME  
OR RASPBERRY.  
PLEASANT & PALATABLE.

	11 lb.	14 lb.	28 lb.	56 lb.	112 lb.
per lb.	1/4	1/3	1/2	1/1	1/-

1 GROSS CARTONS SUPPLIED WITH EVERY  
28 lb. TOGETHER WITH SHOW MATERIAL.

SAMPLES SENT ON RECEIPT OF POST CARD.

**CHRYSTOID (CHEMISTS) LTD.,** MANUFACTURING CHEMISTS,  
BOOTLE, LIVERPOOL.

ESTABLISHED 138 YEARS.

**R. J. FULLWOOD & BLAND'S**



TRADE MARK.

WORLD-RENOUNDED

**Dairy Preparations**

command the largest sale  
in Great Britain and  
Ireland, and are used and  
recommended at the  
PRINCIPAL DAIRY  
INSTITUTES.

# ANNATTO RENNET

"Oleo" and "Sunbeam" Butter  
Colour, Essence of Rennet, etc.

31, 33 & 35 Beviden St., Hoxton, London, N.1  
And Rennet Works, Ellesmere, Salop.

THE WORLD'S BEST

# HONEY

(New Zealand)

**"IMPERIAL BEE"**

The FINEST QUALITY THAT BEES PRODUCE

**BUILD your HONEY TRADE on a sure FOUNDATION**  
QUALITY means REPEAT ORDERS.

Cases	48×1's ..	Screw-top Glass ..	12/9	per doz.
"	48×1's ..	" ..	7/6	"
"	48×1's ..	Monopots .....	11/3	"
"	48×1's ..	" .....	6/-	"
"	30×1's ..	Glass Tumblers ..	12/9	"
"	18×1's ..	Glass Toby Jugs ..	17/9	"
CARRIAGE PAID TO ALL PARTS OF U.K.				

Special quotations to the Wholesale Trade and large buyers.  
Quotations for Bulk (cases of 2/60 lb. tins) of all grades on application.

New Zealand Honey Producers' Association, Ltd.

Sole European Agents:

**A. J. MILLS & CO., Ltd.**

Produce and Canned Goods Department

14, TOOLEY STREET LONDON, S.E.1.

And at  
Birmingham, Bristol, Cardiff, Glasgow, Leeds, Leicester,  
Liverpool, Manchester, Newcastle-on-Tyne



Season—1922



# COD LIVER OIL

GUARANTEED GENUINE.

Manufacturers:

**BRÖDR. AARSÆTHER A/S, Aalesund, Norway.**

LARGEST MANUFACTURERS OF COD LIVER OIL IN NORWAY.

Wholesale only. In 25-gallon tin-lined barrels.

SOLE AGENTS  
FOR U.K.:**FREUDENTHEIL, SMITH & CO.**

21 Mincing Lane, LONDON, E.C.3.

Tel. Add.: "FREUDENRUF."

Codes used: A B C, 4th &amp; 5th Edit.; and Private. Tel.: 12513 CENTRAL



## Kellogg's

Krunbled Bran is a health necessity and should be eaten daily. It naturally and permanently relieves constipation.

Prices and samples from:—

**S. D. SIMOND & CO., LTD.,**  
10 MONUMENT ST., LONDON, E.C.3, ENGLAND.

ALL CHEMISTS  
SHOULD STOCK

## ABDINE

THE GOLD MEDAL HEALTH DRINK,

Quick Seller. Big Profits. Over 40 years' Reputation.  
"Abdine" is the most popular Health Drink, superior to all Mineral Waters. The Original and only genuine Fruit Drink.

Reduced Price List can be had on application.

DUNCAN MacGLASHAN, LTD, ABDINE WORKS, WESTFIELD RD., EDINBURGH

## REAL SILVER LEAF

As supplied for many years to the leading Houses for Pills, Cachous, &amp;c

We also supply

## GOLD LEAF AND GOLD POWDERS

WHOLESALE ONLY.

### E. WINTER & CO., LTD.

Head Office: 64 Cheapside, London, E.C.2. Telephone: Central 1955



# BRAND'S ESSENCE

of Beef, Mutton or Chicken consists solely of the juice of the finest meats, prepared with the greatest care under the most hygienic conditions.

Essential in the Sick Room.

Sold by all Chemists and Stores.

## BRAND & CO., LTD.

Mayfair Works, Vauxhall, LONDON, S.W.8.

# DIABETES

THE Cheltine and Manhu Foods for DIABETICS are now manufactured under one management at Cheltenham Spa, Eng. and full particulars as to trade terms and supplies of advertising-matter are gladly supplied on request to

**THE CHELTINE & MANHU FOODS CO.**  
Cheltine Works, 17 Cheltenham Spa, Eng.





*Trufood is continuously  
advertised in the medical  
and nursing press.*

WEEK in and week out the chief medical and nursing papers carry whole-page announcements of Trufood. The list of media is comprehensive, and effectively covers the professional elements called upon to advise mothers as to the choice of an infant food. As will be seen from the following list, no organ of importance is omitted:—

*The Lancet  
British Medical Journal  
Medical Press and Circular  
Nursing Mirror  
Nursing Times  
Medical Officer, etc., etc.*

In every announcement you will see the slogan:—

OF ALL PHARMACISTS  
in 10oz., 20oz., and 36oz. tins,  
at 2s., 4s., and 7s.

These advertisements are also supported by personal calls upon doctors and nurses, and by constant circularisation and sampling. There is nothing at all spasmodic about the Trufood campaign, which is soundly conceived, both ethically and commercially. We count upon you to support our efforts to create good-will between yourselves and the buying public.

THE SUPREME MILK FOOD FOR INFANTS

# TRUFOOD

TRUFOOD LIMITED, THE CREAMERIES, WRENBURY, CHESHIRE

London Offices : LEVER HOUSE, BLACKFRIARS, E.C.4



## Pre-eminent yet Profitable

HOOKER'S Malted Milk is firmly establishing itself in public favour as the nicest beverage-food of its kind now obtainable; whilst its dietetic and digestive superiority are convincingly attested by independent "Lancet" Analysis (certified copy gratis).

Proprietary pre-eminence usually signifies an inadequate margin; but in the case of HOOKER'S Malted Milk, which is continuously and extensively advertised, the trade profit is actually larger than on any strictly competitive preparation.

Advertising  
Material  
Supplied  
Gratis.

# Hooker's

## MALTED MILK

Theo.  
Hooker &  
Gilbey, Ltd.,  
Buckingham.

H.T.6

## 303 Prizes to be won by Retailers—amounting to £175 in the GREAT PRIZE DISTRIBUTION SCHEME

*promoted by the Proprietors  
of the Pioneer of Health Salt*

# NATURAL

## HEALTH SALT

If you have not received particulars—send for them now. An extensive advertising campaign will interest your customers in **their Prize Scheme**—and the result will be shown in the good trade which will come your way. Natural Health Salt is right for Quality, Price and Profit—and should be your leading line. Order your season's stock now, and get busy on your end of the Prize Scheme.

*New Showcards, Window Bills, and Handbills supplied.*

**WILKINSON & SIMPSON, Limited**  
Manufacturing Chemists, NEWCASTLE-UPON-TYNE



## Saint-Raphael

**Tonic, Restorative,  
Digestive Wine.**

**Known throughout the World,  
and prescribed in all cases of  
ANÆMIA, DEBILITY, and CON-  
VALESCENCE, to Young Women,  
Children and the Aged.**

**DOSE:** One wine-glass after the  
two principal meals.

Recommended by—  
PROF. BOUCHARDAT, Professor of  
Hygiene, Paris Faculty of Medicine,  
DR. MACNAUGHTON JONES, London,  
England.

"For more than thirty years St. Raphaël Wine has been exclusively prescribed, with success, in the Paris hospitals as a pure tonic, by eminent physicians, such as Magendie, Ros'on Chomel, Velpeau, Requin, Monneret, Trouseau, Grisolle, Laennec, &c."—*Union Médicale*, May 8 and June 12, 1873.

"The 'Vin de St. Raphaël' is often used for ladies nursing their own children; it is preferable to stout, which creates an unhealthy fat."—*The Lancet*, London, England.

"St. Raphaël Wine is most precious in all cases where it is necessary to give tone to the system, without effort or shock."—DR. C. DES BARRES.

Cie du VIN SAINT RAPHAEL, Valence, Drome,  
FRANCE.

**To be obtained from all  
Wholesale Druggists.**





Made in England.

You may with entire confidence recommend  
**HORLICK'S MALTED MILK**  
— The Original —  
to your Customers.

Meat and drink in one—a delicious and sustaining Food-Drink which advantageously replaces tea, coffee & other beverages and is an admirable refresher, suitable for all ages.

It is the safest diet for infants and invalids ; being complete in itself and needing no additional milk, it overcomes the difficulties and dangers of a local milk supply.

The Sale of Horlick's Malted Milk—The Original—is and always has been directed through Chemists, while substitutes and imitations are often exploited through other Trades.

Attractive advertising material for Window Display and Counter Distribution free and carriage paid on application to the Company.

**HORLICK'S MALTED MILK CO., SLOUGH, BUCKS., ENGLAND.**



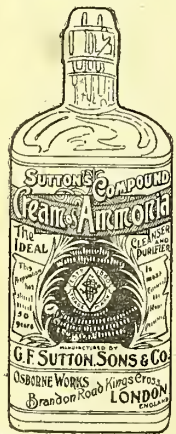


**HUILE  
D'OLIVE**  
VIERGE  
DE PROVENCE

**C. W. JOHNSON & CO.**  
Woburn Lodge  
Upper Woburn Place, W.C.1.  
Direct Importers. Packed and Bulk.  
Prices and Samples on application.  
Telephone Museum 5774

**LIQUID  
PARAFFIN B.P.  
TOILET PARAFFIN  
BRILLIANTINES  
OLIVE OILS  
HONEY  
EUCALYPTUS OIL**

*Send your enquiries to*  
**REDDGRAVE BUTLER & Co., Ltd.**  
Park Lodge,  
Forest Lane, Stratford, London, E.15



**SUTTON'S**  
**CLOUDY AMMONIA**

To-day, as ever, the extra strength of  
**SUTTON'S  
CLOUDY AMMONIA**  
makes it the most  
efficient and the  
most economical  
for all purposes.

The enviable reputation  
of G.F. Sutton, Sons and  
Co. ensures that in  
handing out a "Sutton"  
product the retailer is  
giving his customer the  
very finest quality.  
Doesn't that mean  
"repeat" orders every  
time for YOU?

*Send for particulars of FREE  
SPRING OFFER to*  
**G. F. SUTTON, SONS & CO.**  
Osborne Works, Brandon Rd.  
King's Cross, LONDON, N.7.

**"A good name is more than riches"**

*The Best Hand-made Cigarette in a New Packing*  
**Corinthian Sundried Virginia**  
The Brand to Handle, 1/4 per box of 20.  
Carriage paid on any quantity. **ALL TOBACCO SUNDRIES.**  
*Enclosure sent to Wholesale London Houses.*  
**SADLER & MOORE,** Spital Square, London, E.1  
Bishopsgate,

**"DEPENDABLE  
TOBACCO  
WHOLESALEERS."**

**MIXED PARCELS A SPECIALITY.**  
Established Fifty Years.  
*Price Lists mailed on request.*  
**A PROFITABLE SIDE LINE  
FOR CHEMISTS.**

**SINGLETON & COLE, LTD., CANNON ST., BIRMINGHAM.**

**SALVO PETROLIA**

**The Perfection of Petroleum Jelly**

*MANUFACTURED SOLELY BY*

**THE DEE OIL COMPANY, Ltd.**

**D 23/24, EXCHANGE BLDGS., LIVERPOOL.**

*Telephone: Central 3859. Telegrams: "Cestrian Liverpool."*

Packed in barrels, kegs and smaller  
packages according to requirements.

*Other Grades*

**PETROLEUM JELLIES, WHITE BASES, ETC.**

*Samples and prices on application.*

**"OLEUM DEELINÆ,"** a certain cure for Eczema.



# Have You Secured your Supplies?

August 4, 1922.

## Public Analyst's Report.

REPORT ON A SAMPLE OF LIQUID  
PARAFFIN MARKED E 870a.

Specific Gravity at 60° F - 892  
Viscosity at 100° F (Red-  
wood No. 1 Viscometer) 265"  
Cloud Test - - - - 15° F

The sample is colourless, transparent,  
odourless and tasteless, and has no  
fluorescence.

A mixture of four millilitres of the sam-  
ple, two millilitres of absolute alcohol  
and two drops of a clear saturated  
solution of lead oxide in solution of  
sodium hydroxide, when kept at 70°C  
for ten minutes, remained colourless.

When three millilitres of the sample  
are heated with an equal volume of  
sulphuric acid in a test tube placed in  
boiling water for ten minutes with  
frequent shaking, the acid layer, after  
separation, is not darker than pale  
brown.

Ten millilitres of 90% alcohol when  
boiled with five millilitres of the  
sample are not acid to litmus.

The sample complies with the require-  
ments of the British Pharmacopæia  
except in specific gravity,

Signed ROBERT REDWOOD.

### NOTE.

It will be perceived that the oil has a  
specific gravity of 892 and is therefore  
HIGHER than the B.P. standard.

# STERNS PARAFFINUM LIQUIDUM B.P.

S.G. 890

High Viscosity.

Non-Clouding.

*Wholesale Trade Only*

## STERNS LTD.

80 Royal London House, Finsbury Square, London, E.C.2.



# Petroleum Jelly

White, Yellow, Amber,  
& Ruby Red, for all  
Pharmaceutical and  
Veterinary purposes

MEADE-KING, ROBINSON & CO., LTD.  
LIVERPOOL - LONDON - MANCHESTER - LEEDS.

## ADEPS LANÆ, P.B.

THE FINEST BRITISH LANOLINE PRODUCED

IS MANUFACTURED BY

THE PHARMACEUTICAL LANOLINE CO.

Carnwath Road, Fulham, London, S.W.6.

Telephone : Putney 42.

WHO INVITE ENQUIRIES. Telegrams : "Batapo, Walgreen, London."

## PETROLEUM JELLY.

Gough, Kidston & Co.

*Chemical Manufacturers,  
Tanning & Dyewood Materials & Extracts,  
Gum & Wax Merchants,*

Tel. No. :  
Minorities 2666 and 2667.

Tel. Add. :  
"Kidstonism,  
Bilgate, London."

43/45 Gt. Tower Street, London, E.C. 3.

WORKS :  
BERMONDSEY.

Tel. No. : Hop 2029.



**There's a lot to be**  
A lot of hats, perhaps  
"Luton" Hat Dyes  
plished. If you dye  
"Luton" Dyes you  
the first attempt, an  
colour is chosen, we  
maget.

**STRAW HAT DYES**  
Over 40 beautiful shades  
to combine black. Sur-  
in Dull or Glossy.

Entirely British  
Obtainable from  
all chemists  
with the  
"Luton"  
Faber

**NO HAT TOO F**  
be it a matter how faded or shabby  
it is always worth dyeing  
straw and. Over 40 shades  
of hat permanent  
and economic

**WHITAKER & CO.**  
KENDAL

**THE LAST STRAW**  
Yes, but don't throw  
it away. Slightly  
faded hats can be  
"Luton" Dyes and  
they will be as good  
as new.

**Such a lot of new Hats**  
What, not having new  
hats? Don't you know  
that you can have them  
with or without the  
Luton Dyes. The  
Luton Dyes are  
entirely British and  
are guaranteed to  
give permanent  
results. They are  
also very cheap.

**ALL SHABBY HATS  
MADE NEW.**  
If your straw hat  
has become shabby  
why not dye it with  
"Luton" Dyes at  
home, and convert  
it into a new one?  
By using "Luton"  
dyes you are sure  
of success at the first attempt and your choice  
perfectly using colour to your choice

**STRAW HAT DYES**  
Inexpensive and

**So Easy!**  
Even a child could  
do it with "Luton" Dyes.  
Over 40 shades  
to choose from.  
As one supplied to  
every hat and mill  
in the world.

**NOMORE SHABBY HATS**  
Dye them with "Luton" Dyes. Over 40 shades. Inexpensive, economic and perfect in every way.

**LUTON**  
STRAW HAT DYES

**Such lovely shades**  
from  
and  
to  
to a pale  
rose are  
"Luton"  
res.

**Luton**  
Large Bottle  
with Brush  
1/4

**WHITAKER & CO., Colour Works, KENDAL.**  
London Office & Showrooms, 61 & 62 CRAVEN HOUSE, KINGSWAY, W.C.2.

**"AURORAL" COLD-WATER DYES.**  
Another Whitaker Product which is  
in great demand. It is the finest  
cold-water dye in the world for  
dyeing delicate and costly fabrics.  
Good results always obtained.

**"LUTON" FABRIC DYES.**  
A splendid hot-water dye for all  
materials—easy to use, perfect re-  
sults assured, 24 Beautiful Colours.

**Look at the help you get!**

EVERY one of the advertisements surrounding this border has been designed and written with the object of creating sales for "Luton" Straw Hat Dyes. Therefore they are advertisements designed and written to help you—to bring sales to your establishment—for they must be taken in a personal sense as far as your own district is concerned.

**"LUTON"**  
OVER 40 COLOURS **Straw Hat Dyes**

**"ENTIRELY BRITISH—BRITISH ENTERPRISE—  
BRITISH LABOUR—BRITISH CAPITAL."**

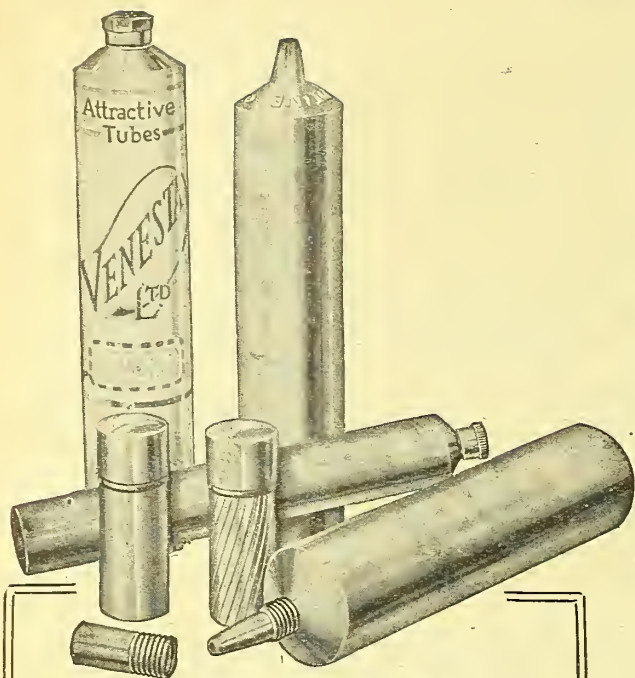
These famous hat dyes make a dual appeal to every lady i.e., on the score of economy and on fashionable grounds, for with "Luton" Straw Hat Dyes it is possible to make a many seasons' old hat extremely modish, and what is equally important, the hat will, in appearance, be just like new.

"Luton" Hat Dyes are permanent, no matter what shade is chosen. **Supplied in either Dull or Glossy Series.**

"Luton" Straw Hat Dyes are easy to sell, they afford a good margin of profit, and what is equally important, they please the customer. A special non-inflammable series is supplied for export.

**ALL CASES AND CONTAINERS FREE.**  
Write for Trade Terms, Patterns and Full Particulars  
of attractive advertising matter for display, etc.





# *Venesta Tubes*

When ordering your next supply of tubes remember that Venesta collapsible tubes possess a quality and finish that make them a real selling force.

They are made from Pure Tin, Lead or Lead-coated with Tin and supplied plain or enamelled and printed with designs to suit customer's own requirements.

We also supply Lip-salve Cases, Sprinklers, etc., and shall be pleased to forward illustrated lists, samples and current prices on application to—

G. Dept.

## VENESTA LTD.

1 Great Tower Street, London, E.C.3.

Actual Manufacturers of  
**TINFOIL**

Plain, coloured and embossed in any size, gauge or shape.



ALL  
BRITISH  
MADE

BY  
BRITISH  
LABOUR.

MENTION

## ROBINSONS' MAKE

WHEN ORDERING FROM  
YOUR WHOLESALE HOUSE  
YOUR NEXT SUPPLY OF

## PILL BOXES

SUPPORT HOME INDUSTRIES.

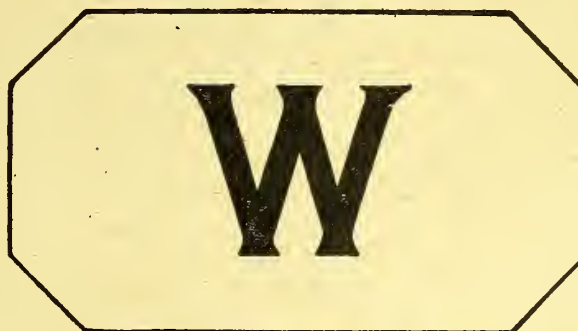
## ROBINSON & SONS, LTD.

BOXMAKERS TO THE  
CHEMIST TRADE

## CHESTERFIELD.



Regd. Trade



Mark, No. 26866.

# BEST FEEDER



Made in Neutral Glass of High Thermal Endurance, with CHEMIST'S  
NAME AND ADDRESS and the graduations in

## SANDBLASTED LABEL

of excellent design and execution.

No particles of sour milk or impurity can lodge inside the  
Feeder as the interior is absolutely smooth.



### BEST FOR THE BABY

who has it, because  
it is the most  
hygienic.

### BEST FOR THE MOTHER

who buys it, because  
it is the most easily  
cleansed and is not  
liable to crack with  
hot liquids.

### BEST FOR THE CHEMIST

who sells it, because  
it bears his name and  
is a constant advertiser  
of his business in the  
family circle.

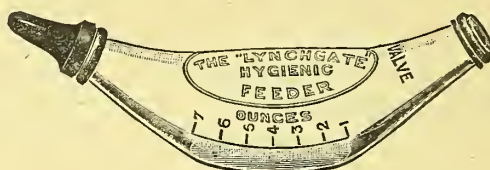
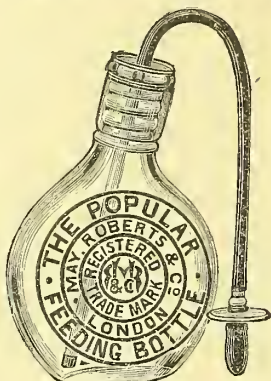
In one gross lots and upwards through your Druggists' Sundriesman.

WOOD BROTHERS GLASS COMPANY, LTD., BARNSELY, ENGLAND.

Established 1828.



# MAY, ROBERTS' FEEDING BOTTLES



No. 330.	<b>POPULAR</b> , white screw stoppers, 6 in. Transparent tubing and teats, and wood unions, each in box with two brushes	Per doz.	<b>7/9</b>
	Ditto ditto without brushes		<b>7/-</b>
No. 340.	As No. 330, but with 9 inch tubing, large shields, glass unions, and better quality boxes, with two brushes		<b>8/3</b>
	Ditto ditto without brushes		<b>7/6</b>
	Spare Bottles		<b>2/10</b>
No. 120.	<b>HYGIENIC</b> . Double-ended, with Transparent teat and valve, each in box, with brush		<b>7/3</b>
	Ditto ditto without brush		<b>6/9</b>
	Spare Bottles		<b>3/2</b>

For orders of 1 gross assorted Feeders we allow a discount of 5%.

## SOOTHERS

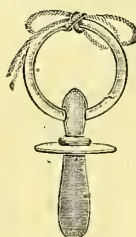
FITTED WITH TRANSPARENT TEATS.



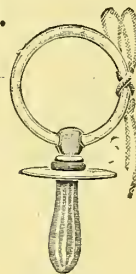
M 1.



M 7 & M 11.



M 17.



M 21.

No. M 1.	<b>Wood</b> mount, small teat and shield, with cord, 3 doz. on card	Per gross	<b>12/9</b>
No. M 7.	<b>Bone</b> mount, ribbed teat and medium shield, with cord, 2 doz. on card		<b>21/6</b>
No. M 11.	<b>Bone</b> mount, superior, with large ribbed teat, large shield, with cord, 2 doz. on card		<b>23/9</b>
No. M 17.	<b>Bone</b> ring, medium teat, large shield, with cord, 2 doz. on card		<b>31/-</b>
No. M 170.	As M 17, but with ribbed teat		<b>32/-</b>
No. M 21.	<b>Ga'alith</b> ring, and large shield, medium ribbed teat, and cord, 1 doz. on card		<b>27/6</b>

For orders of 2 gross Assorted Soothers we allow a discount of 5%.

**MAY, ROBERTS & CO. Ltd., 7-13 Clerkenwell Rd., London, E.C.1**

And at DUBLIN, LIVERPOOL and PLYMOUTH.



# THE CHEMIST AND DRUGGIST SUPPLEMENT

42 CANNON ST.  
LONDON E.C. 4

MARCH 31, 1923

*This Supplement is inserted in every copy of The Chemist & Druggist.*

## THE CHEMIST AND DRUGGIST SUPPLEMENT REVISED ADVERTISEMENT TARIFF.

**Businesses Wanted and for Disposal, Premises to Let, Goods and Shopfittings for Sale, and Agencies**—6/- for 50 words; every additional 10 words or less, 6d.

**SITUATIONS OPEN**—6/- for 40 words; every additional 10 words or less, 6d.

**SITUATIONS WANTED**—2/- for 18 words; every additional 10 words or less, 6d.

**Legal Notices, Tenders, Auctions**, and all specially-spaced announcements, 1/3 per nonpareil line (12 lines = 1 inch single column).

**Miscellaneous (Wholesalers') Section** for odd and second-hand lots—10/- for 60 words; 1/- for every additional 10 words or less.

**EXCHANGE COLUMN** (for Retailers, etc.)—Twopence per word, minimum 2/-

### Box Number.

In each case replies may be addressed to a registered number or nom-de-plume, c/o this Office, at a charge of 1/- extra for each advertisement.

### Payment.

All Advertisements are prepaid, so that remittance must accompany instructions in each case. If it be necessary to telephone or telegraph an urgent announcement this may be done, provided the money is telegraphed at the same time.

**THE CHEMIST AND DRUGGIST, 42 Cannon Street, LONDON, E.C. 4.**

Telephone: Central 3617 (3 lines).

Telegrams: "Chemicus, Cannon, London" (2 words).

## EARLIER CLOSING FOR PRESS.

intended for the Supplement must reach us not later than the

Will advertisers please note that until further notice it will be necessary that Advertisements

## FIRST POST THURSDAY MORNING.

## CHEMISTS' TRANSFERS.

**Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.**

Telephone No.; City 2283.

May be consulted at their Offices on matters of SALE, PURCHASE and VALUATION

1.—**MIDDLESEX**.—Retail and Dispensing Business; returns over £3,000; net profit 25 per cent.; held on lease at moderate rental; good living accommodation, with side entrance; terms, £2,500, or stock at valuation and sum for Goodwill, Lease, and Fixtures.

2.—**CRYSTAL PALACE DISTRICT**.—General Retail Business with N.H.I. Dispensing; returns £1,400 at full prices; single-fronted shop, well fitted and fully stocked; good living accommodation; garden; held on lease; rent, £28 per annum; further details on application.

3.—**FINSBURY PARK (Near)**.—Cash Retail and Dispensing Business, returning at the rate of between £1,500 and £2,000 per annum; single-fronted shop, fitted in mahogany; good working stock; rent £52 per annum; held on lease; no near opposition; offers invited.

4.—**LONDON, N.**—Cash Retail Business in busy shopping centre; returns about £50 weekly under management; net profit, 25 per cent.; double-fronted shop; large, attractive windows; held on lease at moderate rent; price about £1,500, or valuation terms entertained.

5.—**LONDON, S.E.**—(Good-class Residential Suburb).—Old-established Business, Retail and Dispensing; gross receipts average between £4,000 and £5,000; present rate less; there is a good residence, with private entrance; price to be agreed equitably.

6.—**LONDON, E.**—Family Retail Trade with N.H.I. Dispensing; returns £1,000 per annum, plus N.H.I.; net profit, £400; single-fronted shop; estimated value of stock, £900; rent, £40 per annum; price £1,200.

7.—**HOME COUNTY (Large Town)**.—General Retail, Dispensing and Prescribing Business; very old-established; returns, last year, £3,255, at usual prices; double-fronted shop; heavily

stocked; new lease will be granted at a moderate rental; price to be arranged.

8.—**HOME COUNTY**.—Old-established Business, Retail, Dispensing and Photographic; returns between £2,500 and £3,000; well-fitted shop, heavily stocked; ample living accommodation; garden; new lease at low rental; price, £2,000 cash.

9.—**NORTH-WEST COAST**.—Old-established Business, comprising light Retail, Photographic and Optical, also Wine Licence; held by present vendor upwards of 25 years; returns average £3,000 per annum; gross profit, one-third; terms, £1,550 for the business, which is about the value of stock and fixtures, and £1,850 for the property.

10.—**GLAMORGAN**.—Ready-money Business, including N.H.I. Dispensing, with Kodak Agency and Wine Licence; returns last year £2,200, with scope for extension; net profit, after paying all expenses, £550; lock-up shop; rent, £75; long lease; terms, valuation of stock and fixtures and sum for lease and goodwill.

11.—**SOUTH WALES**.—Cash Retail Business; returns, present rate £25 weekly; net profit, 25 per cent.; lock-up shop, well fitted and stocked; moderate rental; very little opposition; price £950.

12.—**SOUTH WALES**.—Retail and Dispensing Business, with Wine Licence and Photographic; good opening for Optics; returns average £30 weekly, with scope for increase under energetic management; excellent house; price £1,500.

13.—**KENT COAST**.—Retail, Dispensing and Photographic Business; returns about £2,000 per annum; net profit approximately 25 per cent.; scope for increase; living accommodation; moderate rental; held on lease; price, £1,100, or near offer.

14.—**DEVON**.—Cash Retail Business; returns about £1,300 per annum; scope for extension; moderate rental; living accommodation; price to be agreed equitably.

## VALUATIONS FOR STOCKTAKING.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone Profit, the value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes the cause of confusion and loss.

Messrs. O. & Co. are prepared to undertake these essential duties and make Special Terms for such services.

**ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C. 4**



# BERDOE & FISH

*Valuers and Transfer Agents,*

41 Argyle Square, KING'S CROSS, W.C.1. Telephone: 651 Museum

1.—SOUTHERN COUNTY.—Light Retail Dispensing and Prescribing Business; returning nearly £5,000 under management; plenty of scope; important town; price £2,750; references required.

2.—SOUTH COAST.—Sound Light Cash Retail; neglected; present returns approach £1,000; plenty of scope; low rent on lease; price for early sale, £650.

3.—YORKSHIRE.—Cash Retail Business, in prominent corner position; returns, £1,450; neglected through ill-health; lock-up shop, fine windows; stock worth over £450; price, £780.

4.—PORTSMOUTH.—Profitable Cash Retail, mostly drugs, opening for N.H.I. and Photo; returns, £800; plenty of scope; low rent; house available shortly; fully stocked; price £550.

5.—KENT (50 Miles Out).—Profitable Cash Retail, with Kodak Agency; returns, over £1,200; net profit, £400; low rent; good house; no near opposition; fully stocked; price £700.

6.—LONDON (WEST MIDDLESEX).—Good Middle-class Cash Retail, in very best position; returns last year, £3,250; good profits; excellent house; long lease; fully stocked; price about £2,500.

7.—LONDON, S.E.—Cash Drug Store, in densely populated district; returns over £20 weekly; fine opening for N.H.I.; lock-up shop; fully stocked; price, £650 cash, or near offer.

## BUSINESSES WANTED.

### Special Notice to Intending Vendors.

Messrs. Berdoe & Fish are in immediate want of sound businesses in all parts of England, especially London, South Coast, S.W. and Western Counties, Midlands, and Home Counties, at prices ranging from £800 to £3,000.

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ESTABLISHED 1870.

Telephone: 651 Museum.

## The Association of Mnfg. Chemists

— LIMITED —

Head Offices: 26-28 Kimberley House, Holborn Viaduct, London, E.C.1 (and at 2 Bixteth Street, Liverpool).

PARKIN S. BOOTH, Accountant and Valuer. PHONE: CITY 6942-43

### WE HAVE THE FOLLOWING BUSINESSES FOR DISPOSAL.

1.—DOVER.—Retail Corner Pharmacy in main street; well-fitted and fully stocked. Returns £15 weekly, but could be easily doubled; good scope for general Photo and Optic development; little opposition. Lock-up shop, with store-room and cellar, but living accommodation might be arranged. 20 years' lease at £20 per annum. Price £625 or offer.

2.—SURREY.—Small Manufacturing Business; premises excellently fitted and suitable for factory use; near station. Held on lease, with 18½ years to run, at £60 per annum. Further particulars on application.

3.—MIDLANDS.—For immediate disposal by order of trustee under deed of assignment, small Retail Business, with N.H.I.; stock about £200; fixtures, £150. Returns £10 weekly, exclusive of N.H.I., but good prospects for development, as business was only recently established. Rent, including living accommodation, 14s. per week. Lease might be arranged.

4.—LONDON, N.—Good Retail Business, taking £1,500 per annum; well-stocked and fitted; little opposition. Two good living rooms; 7 years' lease, with rent, £52 per annum; inclusive price, £950.

5.—SUFFOLK COAST.—High-class, well-situated, old-established Business, with N.H.I. Good scope for Optics and Photo; Kodak agency. Excellently fitted and well stocked. Returns approximately £1,900. Good living accommodation. Price, £1,350, or sale at valuation; 20 years' lease to run at £40 per annum. Rates £12.

**STOCKTAKING.**—Now is the time to take your stock. Perhaps it is too much trouble or you have not the time to spare. Then why not consult the Practical Firm who will do this work for you for a small inclusive fee, without interference with your work. For full particulars write as above.

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BE PREPARED FOR INCOME TAX  
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## BUSINESSES FOR DISPOSAL.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

**BUCKS.**—An old-established Business in good locality for disposal, Retail, Dispensing and Photographic; turnover between £2,500 and £3,000, with good profit; living accommodation; low rent; good lease; well fitted and stocked; price £2,000. Apply "J. B.," 22/713, Office of this Paper.

**DERBY.**—Old-established light Retail with profitable Wholesale sale Proprietary; comprehensive stock; well-fitted shop; living accommodation; electric light; admirably suited for unqualified. Further particulars on application. Spencer, 26 Grove Street, Derby.

**LONDON, E.C.**—For immediate disposal, good Retail Business, small d.f. shop, in main street; well stocked and fitted mahogany, spacious cellar, electric light; returns nearly £1,700, including N.H.I.; good scope Optics, Photographic; small living accommodation; premises on lease at £65; price £900 for immediate cash; genuine investment. P.C.B. 22/20, Office of this Paper.

**LONDON, N.**—Death vacancy. Old-established, brisk, ready-money Business; good prices; very low rent. 29/13, Office of this Paper.

**LONDON, S.E. (main road).**—Drug Store (lock-up); returns over £20 per week; plenty of scope for N.H.I., Optics and Photography; no near opposition; good Prescribing business; middle and working-class cash trade; good investment for keen man; price to be agreed. 30/11, Office of this Paper.

**GOOD-CLASS Dispensing Business** for disposal; weekly takings averaged £45 last year, at good profit; large well-fitted double-fronted shop, situated in good shopping centre. Full particulars on receipt of hanker's or other reference. Apply 30/17, Office of this Paper.

**THE Proprietors of British Patent No. 8,076, dated 3rd April, 1912, for "Improvements in the Manufacture of Acetic Acid,"** are desirous of disposing of the Patent Rights or of negotiating for the grant of Licences to work thereunder. All inquiries should be addressed to Johnson & Willcox, 47 Lincoln's Inn Fields, London, W.C.2.

**VERY old-established Private Limited Company (Wholesale Druggist, Sundries) for Sale;** fine export connection; excellent opportunity for Manufacturing or Proprietary Article Company or Firm. Write, 27/9, Office of this Paper.

**£450** AND stock at valuation.—Newly well-fitted, double-fronted shop, S.W. London; Kodak Agency; steadily progressive business, now taking average £32 per week at usual prices; no near opposition; opening for Optics and Dentistry; rent, lock-up shop, £52 inclusive; lease 14 years; flat available near by if required; illness compels sale; cash buyers with £1,000 furnished with particulars. Apply 27/10, Office of this Paper.

## BUSINESSES WANTED.

**GOOD Mixed Retail and Dispensing Business** wanted immediately by experienced Pharmacist; management or progressive position with view to succession entertained; personal interview. Replies in confidence. 30/250, Office of this Paper.

**PHARMACIST** requires small sound Business in or near London; would undertake management with view to early succession; cash available about £1,000. Full particulars (in confidence) first letter. Apply 29/32, Office of this Paper.



**SALES BY AUCTION.**

By Order of Messrs. Henry Lamplough, Limited.

MESSRS. DEBENHAM, TEWSON & CHINNOCKS  
Will Sell, at the Auction Mart, 155, Queen Victoria Street, E.C.,  
on Tuesday, April 24, at 2.30, in three lots (unless previously  
disposed of by private treaty)

THE GOODWILL AND RECIPE  
and the Beneficial Interest, Trade Mark and Rights of  
LAMPLOUGH'S PYRETIC SALINE.

Having a reputation of over 90 years, and well known as an  
infallible Blood Purifier and a safe remedy for Fever and  
Internal Troubles. This celebrated preparation is made from  
the recipe of the late Henry Lamplough, the well-known Chemist,  
who, during his extensive practice of about 50 years made the  
sale of this Saline the principal feature of his business. It is  
anticipated that by judicious advertising the manufacture and  
sale of this preparation could be considerably extended and the  
PROFITS LARGELY INCREASED.

The following Premises, the property of the Company, will  
also be offered—

No. 115 HOLBORN.—FREEHOLD SHOP and OFFICE PRE-  
MISES, one door from Hatton Garden and Holborn Circus,  
comprising Ground Floor, Basement, and four upper floors.  
Area, 550 sq. ft. Floor space, 2,220 sq. ft. VACANT  
POSSESSION.

No. 58 BLACKFRIARS ROAD.—LONG LEASEHOLD Shop  
and Warehouse, comprising Ground Floor, Basement and Three  
Upper Floors. Floor space, 4,350 sq. ft. Lease, 66½ years.  
Ground Rent, £25 per annum. VACANT POSSESSION.  
Particulars of J. W. ASPREY, Esq., Solicitor, 5 Gray's Inn  
Square, W.C.1. and of the Auctioneers, 89 Chancery Lane, E.C.2,  
and 15 Park Place, S.W.1.

**LEGAL.**

NOTICE.—Consequent on the death of Mr. E. Williams, Phar-  
macist, of Arwenack Street, Falmouth, will all firms having  
statements against the business (up to and including March 25)  
please send in same immediately?

**AGENCIES.**

6s. for 50 words or less; 6d. for every additional 10 words  
or less, prepaid.

REPRESENTATIVES with established connections required to  
sell popular Proprietary Article on liberal commission basis  
to Retail Chemists in N., E. and S.E. Counties; must have good  
references; state present lines, also ground covered. 28/14,  
Office of this Paper.

**FINANCIAL.**

DIRECTORSHIP required with Wholesale, Manufacturing or  
Proprietary Firm. Advertiser is a qualified Pharmacist  
with many years' experience in the Wholesale, and has had  
managerial experience; a good export connection out East; cash  
available £1,000; principals only; all communications con-  
fidential. 29/11, Office of this Paper.

**FOR SALE.**

FOR Sale, complete Fittings Chemist's Shop, 13 ft. Drug  
Fixture with 48 drawers, 4 Lockers, 12 ft. mahogany  
Counter, Dispensing Counter, Shop Rounds, Carboys, Counter  
Case, etc.; cheap to clear. Apply P.C.B. 17/53, Office of this  
Paper.

TALCUM Powder for Sale, 100 dozen, in decorated tins, shaker  
tops. What offers for cash? "F. X." 27/2, Office of this  
Paper.

**PREMISES FOR SALE.**

FOR Sale with possession, in main street of Leicester, Retail  
Shop and Rooms over; corner position; price £4,000, free-  
hold. Write Box 1508, Sells Advertising Offices, Fleet Street,  
E.C.4.

FREEHOLD Business Premises for Sale in main thoroughfare,  
within 100 yards of centre of Leicester; a most desirable  
position for quick ready-money trade. Apply W. Kirkland,  
Lutterworth Road, Leicester.

**SITUATIONS OPEN.****[HOME.]****RETAIL.**

LONDON.—Manager required; age 26 to 40; must be good  
Salesman and Window-dresser, with thorough knowledge of  
Toilet and Sundries side of business, and Photography. Apply  
by letter, giving full particulars, to 22/715, Office of this Paper.

LONDON.—Assistant required; age from 25 to 35; must be  
accurate Dispenser, smart Salesman and Window-dresser,  
with Photographic knowledge. Apply by letter, giving full par-  
ticulars, to 22/716, Office of this Paper.

LONDON, S.E.—A fully qualified Assistant wanted, lady or  
gentleman; must be good Window-dresser, with good know-  
ledge of Photography. Apply Brooks' Drug Stores, 509 New  
Cross Road, S.E.14.

PORTSMOUTH.—Wanted, at once, competent Assistant for  
good-class Retail and Photographic; good Salesman and  
Window-dresser. Apply, stating age, experience, references, and  
salary required, to Lewis, 117 London Road, Portsmouth.

SOUTH COAST.—Wanted, about end of April, young qualified  
Junior; must be good, reliable Dispenser and smart Sales-  
man; no N.H.I. work. Reply, giving full particulars of age,  
experience, and salary required, to Geo. A. Harmer & Son,  
Pharmacists, Eastbourne.

WINDSOR.—Messrs. Russell & Co. require a capable  
Assistant, about 23; must be well recommended; personal  
interview essential. Full particulars in first letter, please!

A SMART Improver or Junior Assistant required at once;  
quick at Counter and Dispensing; knowledge of Photo-  
graphic work; references; salary required, etc., in first letter;  
photographs returned only if stamped, addressed envelope  
enclosed. If no reply in 10 days, applicants please consider  
vacancy filled. S. Cook, M.P.S., Pharmacist, Nottingham.

ASSISTANT Manager, qualified, young, active, experienced,  
a good Window-dresser and courteous Salesman, with com-  
petent knowledge of Kodak Photography, for country branch  
business in South Wales; Welsh speaking preferred. State full  
particulars as to age, salary, etc., in first letter. 27/3, Office  
of this Paper.

ASSISTANT, unqualified (male), young, for Counter; pleasing  
manner, smart appearance, good Salesman, and neat  
worker essential. Applications unanswered within 7 days respec-  
tively declined. Full experience must be stated with salary  
required to Matthews & Son, 722, High Road, Leytonstone, E.11.

ASSISTANT, unqualified; smart; knowledge of Photography.  
Briggs, 585 Lea Bridge Road, Leyton.

BOOK-KEEPER Assistant wanted by Messrs. Dolbear &  
Goodall, 108 High Street, Oxford; good handwriting,  
elementary knowledge of book-keeping essential; clerical work  
first daily duty, then to assist generally in work of high-class  
dispensing business. State full particulars; salary required;  
outdoors.

CAPABLE Lady Dispensers, Hall Certificate, required for  
Reading, Hammersmith and North-West Districts; must have  
had shop experience. Apply by letter, giving full particulars of  
training, experience, age and salary required, to 22/717, Office  
of this Paper.

CHEMIST, qualified, wanted to take charge of branch. State  
age, experience and salary expected, enclosing copies of  
not more than two recent testimonials, to 22/698, Office of this  
Paper.

EVENINGS, West-End.—Qualified Assistant with either good  
Continental or West-End experience; must be able to  
speak French. State age, height, and salary required to 30/8,  
Office of this Paper.

JUNIOR required immediately; must be used to Insurance  
Dispensing; salary £2 10s. Dawson, 102 Falcon Road,  
Clapham Junction

MANAGER required for Rickmansworth Branch; must be  
thoroughly reliable and experienced; about 30; a good  
Window-dresser, with Photographic knowledge; tactful and  
obliging with customers; accommodation could be provided.  
Apply by letter, giving full particulars, to Parke's Drug Stores,  
Ltd., 65 Harwood Street, Chalk Farm, N.W.1.

QUALIFIED man for Western suburb; age about 30 to 38;  
good Salesman and Window-dresser, with knowledge of  
Photography; married man preferred; permanency to suitable  
applicant. Apply 30/23, Office of this Paper.

WANTED, Doctor's Dispenser (male), on April 16; perma-  
nency; rooms provided; state salary and full particulars.  
Apply, Dr. Lamplough, Knighton, Alverstoke, Hants.

WANTED, qualified Assistant for old-established Family and  
Dispensing business in West of England; Optics and Photo-  
graphy an advantage. All particulars, with photo, to 31/8,  
Office of this Paper.

WANTED, energetic Manager, qualified, age 27, single; out-  
doors; must be a good Prescriber and Window-dresser.  
Apply J. Keall, 5 Putney Hill, S.W.15.

YOUNG qualified Assistant wanted for light retail, Dispensing  
and Photographic; state wage, experience, and when dis-  
engaged. Barker, Evington Road, Leicester.

YOUNG Pharmacist (Surrey) required as Manager to develop  
new branch; good address and undeniable references. Apply,  
stating full particulars and photo, if possible, 31/9, Office of  
this Paper.



## WHOLESALE.

**M**ANCHESTER.—Unqualified Assistant required for the Drug and Fine Chemical Order Counter; must have a good practical knowledge of chemical apparatus. Full particulars as to experience, age, and salary expected, to 30/20, Office of this Paper.

**N**ORTH-EAST COAST.—Vacancy for Chemist as Branch Manager; experienced in Window-dressing and Photography; apply with particulars of experience and salary required. 22/707, Office of this Paper.

**S**OUTH COAST.—Wholesale House doing Packed Specialties, Tablets, etc., extremely well, wish to correspond with gentleman having a connection on commission lines. 22/714, Office of this Paper.

**E**NERGETIC Salesmen calling on Perfumers and Soap Manufacturers, etc., to sell special Synthetics; men with good connection given very liberal commission; good side line. Apply 21/681, Office of this Paper.

**E**XHIBITION engagement.—Smart qualified man wanted for three weeks from April 12 for Women's Exhibition; must be good Salesman and of good address. 22/712, Office of this Paper.

**H**UMAGSOLAN, LTD., proprietors of the world-famous Hair Tonic Grower, are seeking one or two exceptional Travellers covering (1) London and Home Counties, (2) Midlands and South Wales; exceptional opportunity for those with proved records of success; small salary and generous commission. Full details, in confidence, to "Sales," Humagsolan, Ltd., 10 Charing Cross Road, London, W.C.2.

**P**ACKER wanted, man of experience, used to packing Druggists' Sundries and Perfumery; position of Head Packer is vacant with old-established house. Apply in first instance, by letter only, to 22/705, Office of this Paper.

**P**OSITION open, Sales Department Chemical Manufacturers, for man with good character and education, capable of handling sales correspondence and records in businesslike way; preferably with some experience and connection in Chemical trade; apply, stating age, experience and references, and salary required, to 22/710, Office of this Paper.

**R**EPRESENTATIVE wanted for S.W. London and Surrey; also one required for Midland Counties; must have connection on this ground. Apply, by letter, to Arthur Berton, Ltd., 15/17, Worship Street, London, E.C.2.

**R**EPRESENTATIVES for (1) the South Coast, (2) Northumberland, Cumberland, Westmorland and Durham, wanted by Manufacturing Chemists with established connections on the areas, to offer all goods other than Drugs; applicants should give fullest particulars of previous experience, and also state age. 22/708, Office of this Paper.

**R**EPRESENTATIVES. — Manufacturers with special leading lines for the popular trade, desire to get in touch with gentleman having strong connections amongst Chemists and Stores in London and the Provinces, with the opportunity of adding another Agency to their present representation. Exclusive territory granted and commission paid on all business. Past six months show 80 per cent. repeat orders. Only really high-class representation entertained. Please state territory covered and lines carried, which confidence will be strictly respected. Apply to 22/711, Office of this Paper.

**R**EQUIRED by provincial firm of Manufacturing Chemists (wholesale and retail), a smart Representative to take over ground, Irish, Scottish, and Welsh journeys; only men with sound knowledge need apply. Write, giving full particulars as to wages, etc., in confidence, to 28/10, Office of this Paper.

**R**EQUIRED by important London firm, first-class Pharmaceutical Research Chemist for work on Glands, especially Thyroid and Pituitary. Write, stating full qualifications, details of experience, age and salary required, Box "D. S." Wilkes Bros. & Greenwood, Ltd., 26/28, Rushworth Street, S.E.1.

**W**ANTED by an old-established Midland Drug House, Representative to work North Wales, Lancashire, Yorkshire and North Staffs., on commission, amongst Doctors, Chemists, and Veterinary Surgeons. Apply, 22/709, Office of this Paper.

## [COLONIAL, INDIAN AND FOREIGN.]

**C**ANADA, SOUTH AFRICA, NEW ZEALAND.—Advertisers, Export Merchants in City, specialising in Drugs, Druggists' Sundries, etc., require Representatives, on commission and part expenses, with established connection in countries named. Apply, P.C.B. 22/3, Office of this Paper.

## SITUATIONS WANTED.

## RETAIL

## [HOME.]

**A**.—MANAGER, Senior, or Locum; qualified; 5 ft. 10 in.; 12 years' London experience. "Pharmacist," Sunnyside, Hartington Road, St. Margaret's-on-Thames.

**A** CAPABLE, smart, qualified man, 28, desires post in good-class Pharmacy; 12 years' all-round excellent experience, London and provincial; energetic; permanency desired. 29/30, Office of this Paper.

**A** LADY Dispenser (Hall), Book-keeper, Counter-hand, age 24, requires post with Chemist or Doctor; 5 years' experience; highest references. Miss Williams, 61 Paget Street, Cardiff.

**A** QUALIFIED Assistant (25), 11 years' experience in London and Provinces, desires post in London or South Coast; good references; disengaged April 28. "Pharmacist," 40 Foyle Road, Blackheath, S.E.3.

**A** QUALIFIED, thoroughly experienced woman Dispenser wants post, Doctor, Institution, lock-up Surgery; would reside latter; Locum booked; moderate salary. "Dispenser," 108 Lower Richmond Road, Putney, S.W.

**A** N experienced Assistant, age 22, desires post, wet or dry; excellent refs. S. A. Monk, Ellesmere Avenue, Alfreton, Derby.

**A** S Manager or Senior; permanency if possible; qualified; 30; married; excellent all-round experience; good references; personal interview arranged. "M.P.S.," 9 Harcourt Rd., Redland, Bristol.

**A** SSISTANT, unqualified, 31; 10 years' West-End experience; Dispensing, Counter, Manufacturing and Packing own Proprietaries; excellent references; disengaged after 31st inst.; present situation 5 years. "Din," 56 Davies Street, W.1.

**A** SSISTANT; disengaged; large Dispensing experience; 4 years last berth; Chemist or Doctor. "Dispenser," 36 Infirmary Walk, Worcester.

**A** SSISTANT, Senior or Manager; temporary or permanent; unregistered; 7 years' present berth; Dispensing, Prescribing, Photography, Shipping; age 45; please state salary. "H. W.," 7 Windsor Place, The Hoe, Plymouth.

**A** SSISTANT; unqualified; 30, good all-round experience; Locum or permanent; excellent references. "Statim," 28/36, Office of this Paper.

**A** SSISTANT, 31; married; unqualified; 12 years' good all-round experience in Dispensing, Window-dressing, Salesman, Photography (Kodak); capable of taking charge; excellent references; Midlands preferred. "Rhei," 28/38, Office of this Paper.

**A** SSISTANT; unqualified; 22 years' all-round experience, London and country; good references. "Chemicus," 48 Balham Park Road, Balham, S.W.

**B**RANCH management or Senior position wanted by qualified man immediately after Easter; 38; single; excellent all-round and successful experience; highest recent references; personal interview courted. 30/25, Office of this Paper.

**B**RANCH Manager, young, qualified, Square trained; good appearance and address; accustomed to brisk Retail, is open for re-engagement. 30/1, Office of this Paper.

**D**ISENGAGED for Locum or permanency; Minor man; varied experience; moderate terms. "Pharmacist," 3 Regina Road, Baling, W.13.

**F**IRST-CLASS all-round man, disengaged; 20 years' London, Continental and South Coast experience; 38; 5 ft. 9 in.; good appearance and address; married; excellent references; qualified. Felix, 72 Ditchling Road, Brighton.

**J**UNIOR requires change with view to widening experience; 4 years' service with Chemist; reliable, trustworthy. Miss Hazeldine, 36 Dartmouth Road, Olney, Bucks.

**L**ADY Dispenser-Book-keeper, Hall Certificate, Hospital, Surgery experience, desires post Doctor, Institution; references. Shakespeare, 42 Buckleigh Road, Streatham, S.W.

**L**ADY Dispenser (Hall), good references, experienced, requires post with Doctor or Institution. G. Parkinson, Sherburn Vicarage, Durham.

**L**ADY Assistant requires situation with Photographic Chemist; expert knowledge of D. and P.; experienced Kodak, Projection Printer; general counter; 5 years' experience. 29/3, Office of this Paper.

**L**ADY Dispenser (Hall) requires post with Chemist; lengthy London experience; excellent references; London preferred. 30/9, Office of this Paper.

**L**OCUM, take entire charge; highly recommended; now book-keeping; date inquiries solicited; moderate terms. "Pharmacy," 2 Christian Road, Preston.

**L**OCUM; qualified; 15 years' experience London, provincial, holiday resort, country, mixed businesses; Photography, etc. Flint, Scartho, Grimsby.

**L**OCUM or permanent; Branch Manager or Assistant; 40; good references for Dispensing and Retail. Turner, 72 Tideswell Road, Eastbourne.



**LOCUM**, unqualified, 22, open for next six months; good all-round experience. Rd. Thomas, School Row, Cwmbach, Aberdare.

**M.P.S.**, tall, 31, married, excellent references and experience, London and provincial, last position 22 years, Army service 4 years, R.A.M.C. compounder, desires post as Assistant, permanent or temporary; would entertain locum work; salary moderate; knowledge of French; at liberty April 21. Write 29/36, Office of this Paper.

**MANAGER**, qualified, married; 25 years' best home and Continental experience; fluent French; first-class Dispenser and Counterman; successful Manager. Scott, 4 Avenue du 24 Janvier, Lausanne, Switzerland.

**MANAGER** or Locum; disengaged April 2; qualified; good experience. James, c/o Mr. Hewitt, Pharmacist, 493 Seven Sisters Road, N.15.

**NORTH London**.—Position Manager or Assistant with owner; qualified; age 46; would entertain part proprietorship; very many years in present position; references and experience good. "Stamford," 30/26, Office of this Paper.

**PART-TIME**; qualified; London district; disengaged Tuesdays, Wednesdays, and Saturdays; 1s. 6d. per hour. Summers, 98 Greyhound Lane, Streatham Common, S.W.

**PHARMACEUTICAL Chemist**, 25; single; 3½ years' war service; sound theoretical and practical experience; Liverpool district preferred. M.L. 812/23/3, Office of this Paper.

**QUALIFIED Pharmacist**, young and capable, seeks permanent or temporary situation. 28/39, Office of this Paper.

**QUALIFIED Pharmacist**, 40, thoroughly capable and experienced in good-class business, desires position as Manager, Senior, or responsible post; capital available, and open to take partnership with ultimate succession, if desired, in large business. "Pharmacist," 38 Hawarden Avenue, Wallasey, Cheshire.

**QUALIFIED**, 27, as Locum or permanency; good Salesman, accurate Dispenser; Photographic; reasonable salary. Brookshank, 17 Langney Road, Eastbourne.

**QUALIFIED**; elderly; disengaged after Easter; excellent Prescribing and all-round experience; £3 weekly, or offer. Walker, 66 Vancouver Road, Forest Hill.

**QUALIFIED lady**, 23; 6½ years' shop experience; Dispensing, Counter and Photographic. Thornton, 404 Leeds Road, Nelson, Lancs.

**QUALIFIED (25)** desires situation, Cardiff or Mid-Glamorgan; good experience in all branches; able to take charge; keen and energetic. 30/24, Office of this Paper.

**REGISTERED**, elderly; branch, small; super Prescriber, etc.; at liberty; moderate salary; good testimonials. Address "D," 55 Walter Street, Idle, Bradford.

**TYNESIDE**.—Assistant, Locum, manage branch (or view to purchase); up-to-date experience; unregistered. "Competent," 86 Grosvenor Drive, Whitely Bay.

**UNQUALIFIED Assistant**, young lady, wishes to gain experience in Dispensing; small remuneration; London preferred. 29/8, Office of this Paper.

**WANTED**, mid July, end September, or part, position, prior to Minor Course; references. Harris, 9 Clifton Street, Cardiff.

**YOUNG gent**, 21, Dental Mechanic (all branches), wishes to be apprenticed to Chemist/Dentist for Chemistry; will undertake all Dental work. "Girvan," 60 Edgeley Road, Stockport.

### WHOLESALE.

**AS Assistant Chemist (Works or Research)**, 24, B.Sc. (Hons.), Lond.; good knowledge of French, Physics and Maths; 3 years' war service; willing to take any position to suit qualifications. M.L. 4467/22, Office of this Paper.

**ASSISTANT**, 41; married; knowledge of Optics, Photography, Surgical Goods, Wholesale Dry Salting, Pickles, Sauces and Jam Making, Packed Goods; experience of Mineral Water trade, including making of Cordials, Non-alcoholic Beverages and Essences; has experience Traveller in above in North of England and South of Scotland; willing to take any position. M.L. 99264, Office of this Paper.

**ASSISTANT Chemist (Works, Laboratory)**, 28, Public School, B.Sc. Inter. (Lond.); French fairly fluent, some German; scientific knowledge both languages; has had some commercial experience; willing to take any post. M.L. 4772/22, Office of this Paper.

**ASSISTANT Sales Manager**, age 30; 10 years' actual selling on the road; excellent knowledge of the trade and advertising; first-class selling record; references of the highest. 12/36, Office of this Paper.

**CHEMIST (Industrial Works, Laboratory or Research)**, 22, B.Sc. (Lond.), A.I.C., first-class diplomas, French and German, willing to take any post for which qualifications would be suitable. M.L. 1465, Office of this Paper.

**CHEMIST-METALLURGIST**, M.Sc.; pre-war Chief Chemist and Process Controller for 10 years in U.S.A.; past 23 years Chief Chemist and Metallurgist works in London; disengaged owing to reduction of staff; desires suitable appointment. M.L. 71755, Office of this Paper.

**CONSULTANT Analytical Chemist**, Lecturer, Coach, Control of Works; 34, married, 5 years' war service; educated Perth Academy, Glasgow University, M.A., B.Sc.; Sales organisation, Chemistry and Engineering; any appointment suitable to qualifications. M.L. 18131, Office of this Paper.

**DEMONSTRATOR or Analyst**, 26; educated Cambridge University, B.A. (Hons., Cambridge), Int. B.Sc. (Lond.); good knowledge Latin, Greek, French, German; specialising Analytical and Industrial Chemistry; able to teach Science or Maths; willing to take any post. M.L. 2988, Office of this Paper.

**GENTLEMAN**, of 14 years' experience in the Drug Trade, wishes to represent any Wholesale House on salary and commission basis; excellent references. 28/35, Office of this Paper.

**METALLURGICAL Chemist**, 22, Public School education, Associate in N.F. Metallurgy, post in Laboratory of Works. M.L. 28279, Office of this Paper.

**METALLURGICAL Chemist**, 28, B.A. (Cantab); 3 years training in Metallurgy and Assaying, specially desires post as Metallurgical Analyst; wide experience in analysis of ores and alloys of all metals in microscopic examination and heat treatment of alloys. M.L. 5817/22, Office of this Paper.

**PHARMACIST**, proceeding in April to South African and Australian ports, will call on Chemists to introduce lines put forward by wholesalers, or to carry out business transactions; will be in London second week in April; returning in August; firms wishing to take advantage of this should write at once to "Pendower," Porthleven, Cornwall.

**UNQUALIFIED (20)**, 5 years' experience Retail, desires position in Laboratory of good wholesale House; Manchester district preferred; state salary and full particulars. "Forward," 30/27, Office of this Paper.

**WOMAN**, 27, well educated, M.P.S., seeks responsible administrative position in Institution, Wholesale or Manufacturing House; experienced; methodical; organising ability. 25/2, Office of this Paper.

### [COLONIAL, INDIAN AND FOREIGN.]

**COLONIAL**, qualified, thoroughly efficient and capable Pharmacist, desires post in a British Colony, either retail or wholesale; would entertain partnership. "Chemist," 92 Greenwood Lane, Liscard, Cheshire.

### MISCELLANEOUS.

**SECOND-HAND CHEMISTS' FITTINGS**.—We have an exceptionally fine selection of these in all sizes; prices are right, and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, RUDDUCK & CO., 262 Old Street, London, E.C.2.

**SHOP FITTINGS**.—Large quantity of Showcases, Fittings ready for use; Silent Salesman, All-glass Counters, Dispensing Screens, Oak Window Fittings, etc. PHILIP JOSEPHS & SONS, LTD., 93 Old Street, London, E.C.1.

**SHOP FITTINGS**.—Second-hand Drug Fitting, glass-fronted Counter, Wall Cases, and Dispensing Screens for immediate delivery; lowest prices consistent with high-class work. H. MILLS & SONS, Shopfitters, 163-165 Old Street, E.C.1.

### LIMITED COMPANY FORMATION.

Before placing your Company in other hands, get my quotation. I specialise in Chemist and tradesmen private companies and quote inclusive charge; no extras. A. B. Slack, 180 Garston Old Road, Liverpool.

**SPECIAL CLEARANCE STOCKS** of all descriptions, Tumblers, Pots, Tins, Caskets, Wooden Bowls, Essential Oils, Chemicals, Wrapping and Art Papers, Fibre Boxes, Packing Cases, Fabric Linings, etc., about 100 gross; all of excellent quality and condition, suitable for Chemists and Druggists; Soap, Perfumery and Dentifrice Manufacturers; small or large quantities sent carriage paid. Specify exact requirements to 22/706, Office of this Paper.

### EXCHANGE COLUMN.

2d. per word: Minimum 2s.

### FOR DISPOSAL.

**SANTONINUM**, 6 oz. What offers? Henry Hindle, King Street, Blackburn.

### WANTED.

**PHARMACEUTICAL Books** wanted; send priced list. Gower, Bookseller, 41 Voltaire Road, Clapham.

**TABLET COATING PAN**, 24 in. to 36 in., without stand or gearing. Cuxson, Gerrard & Co., Oldbury.

**TWO slender swan-neck Stopped Window Carboys** to hold not over 1 gallon. Apply 22/692, Office of this Paper.

**RADIUM SALT**, pure of Residues, old Applicators, etc. Apply Harrison Glew, Radium Laboratories, 156 Clapham Road, S.W.9.



## MAC-SON'S SMALL AD. COLUMN

**POMMADE HONGROISE**—Job Clearance line—13/6 per gross.

**CAMPBOR ICE-BLOCKS**—Send for Sample and state requirements.

**THE KUTE WRIST STRAP**—If you do not already stock this line, get busy now. Sample free on request.

**GINGER BEER POWDER—NUTYPE**—The line of the moment. A 4½d. packet makes 2 gallons. If your district is thirsty, get this going. Free Sample on request.

**LEMONADE POWDER—NUTYPE**—The get-up of this line creates the sale, and the contents the continuity idea. Ask for Sample.

Send a P.O. for 5/- for our Traveller's Surprise Packet Money returned if not satisfied.

### MACSON'S LTD.

Manufacturing Chemists,

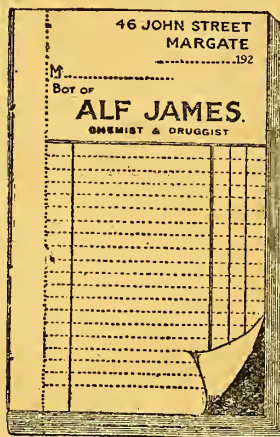
BLYTH, near NEWCASTLE-ON-TYNE.

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### 54 Tins "Rodine" Sold in One Week

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February 10, 1923.

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Dear Sir,—Please send 6 dozen 7½d. "Rodine" Rat Poison. Cheque enclosed.

I put display in window on Monday, February 5th, and have sold 4½ dozen 7½d. size, which, considering I did not stock "Rodine" previously, is, I think, very satisfactory for the first week's display at the bottom of a small window.

Yours truly,  
(Signed) J. M. PIRIE, Chemist.

### It Pays to Show "Rodine"



"Rodine" yields nearly 100% protected profit, is extensively and attractively advertised. Showcards for Window Show are sent on request. Get it direct from the Maker.

### HARLEY

Manufacturing Chemist,  
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(Incorporating the National Association of Chemists' Assistants)

**AIDS AND PROTECTS**

those employed in all Branches of the Drug Trade.

(Public Services—Retail—Wholesale—Manufacturing)

**WRITE FOR PARTICULARS—H. R. NIGHTINGALE, M.P.S.**

General Secretary,

149 Newington Causeway, LONDON, S.E.1

A New Company in process of formation will be glad to hear from Chemists having retail businesses for disposal, or desiring financial assistance. Those interested are invited to communicate with the solicitors to the parties. Enquiries will be treated in strictest confidence.

Write, Box 283, c/o Judd's, 87 Gresham St., E.C.2

## CLINICAL THERMOMETERS

Half-minute; lens front of reliable make; supplied in any quantity desired. A sample thermometer sent post free for 1/- An excellent line for India, Ceylon and the Tropics generally.

**S. A. OWEN, Le Coie, Springfield Road, JERSEY, C.I.**

We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents or assistants, or wish to sell their businesses, an Advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and remittances can be sent to us direct or through the advertisers' correspondents in this country.



## IMPORTANT ANNOUNCEMENT

# CHAS. PAGE & Co. LTD.

THE above Company begs  
to announce that they will  
be REMOVING their HEAD  
OFFICES on April 3rd, 1923,  
to more commodious premises  
situated at

**37-39 KING WILLIAM STREET  
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Telegrams :—  
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All Departments will now be housed  
under one roof, and this we hope will  
enable us to increase the Efficiency of  
our Service and at the same time prove  
a convenience to our Friends.



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## **EDWARD TAYLOR, Ltd.**

*Manufacturers of Medical & Surgical Plasters,*

**SALFORD & LONDON**

beg to announce

## **PRICE REDUCTIONS**

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**POROUS PLASTERS, BREAST PLASTERS,  
RUBBER ADHESIVE PLASTER ON SPOOLS,  
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HOSPITAL STRAPPING, ETC.**

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*New Illustrated Price List now ready.*

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*Head Office :*  
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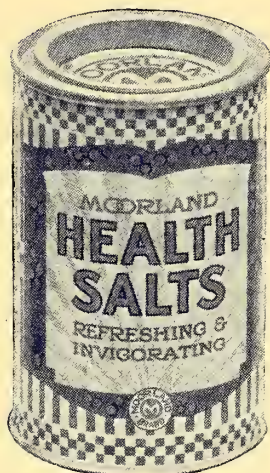
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A line that will bear comparison with any Health Salt on the market, in price, profit, quality, pack and show matter.

Moorland Health Salts are composed of very fine granules, completely soluble, and which give a sustained effervescence when placed in water. The tin is both outwardly and inwardly difficult to improve upon. Every seam is treated with a waterproof inodorous cement, thus protecting the granules from dust and damp. The contents are as dry and fresh at the bottom of the tin as at the top.

The show matter is quite the best of its kind. A very attractive show can easily be made with a stack of tins and the show matter we supply free with each order.

Finally, the most important thing, the price, is good. Highly competitive, it allows you a most generous margin of profit.

5/6 per dozen.

5/- per dozen gross lots.

4/6 per dozen 2 gross lots.

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## MOORLAND *Morning Salt*

HERE is a line of which we are immensely proud. Confident, too, that it has a big future. We have got right away from the stereotyped brand of Salt, and in every way Moorland Morning Salt is far and away beyond competitors.

The pack is excellent. A handsome bottle with a distinctive label, it has a patent cork stopper, flanged in order to prevent it slipping into the bottle as the ordinary cork will do. Over this is screwed an aluminium cap, keeping the Salt doubly dry and free from dust, and also very convenient as a measure if a spoon is not handy.

And the Salt inside the bottle is just right. It is effective, very pleasant as a drink, and makes many regular customers.

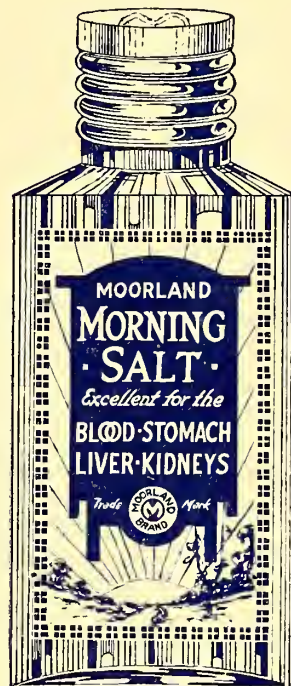
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11/6 per dozen.

11/- per dozen gross lots.

To retail at 1/9.

W. B. CARTWRIGHT, Ltd.  
RAWDON, NEAR LEEDS





# MORNY

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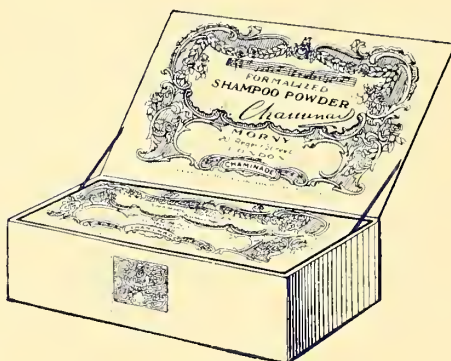
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Highest Class Pharmacy and attract the best type of customer.*

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